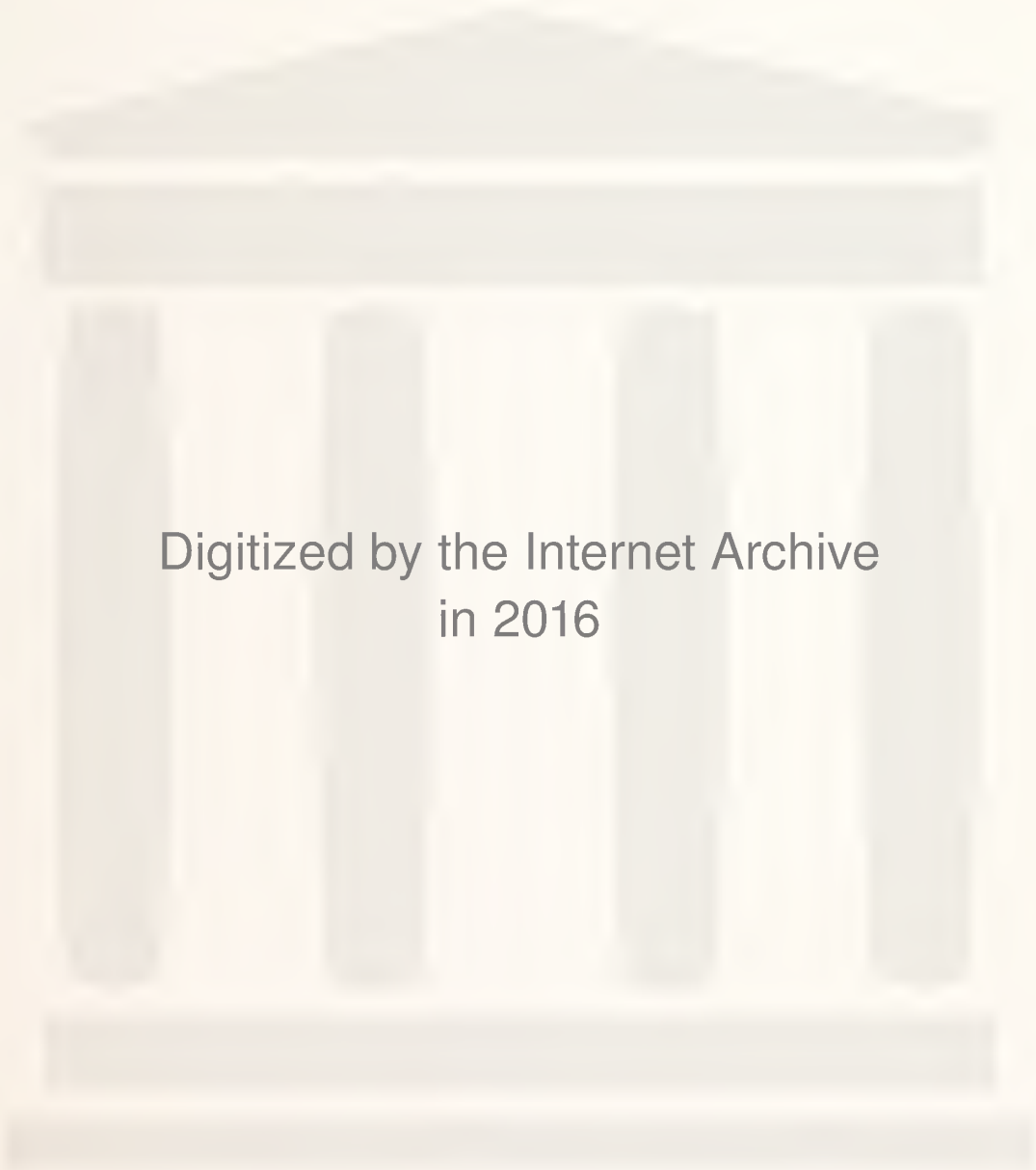
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Call it what you will, it may be premalignant.

Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



,and Efudex® (fluorouracil) 5% cream can resolve it.

'all it actinic, solar or senile keratoses, ıany regard it as "precancerous."[1,2]

'opical fluorouracil, considered by some dermatologists to be a major dvance in the treatment of multiple solar keratoses,[3,4] offers the physi- ian a relatively inexpensive alternative to cryosurgery, electrodesic- ation and cold knife surgery. Of the topical fluorouracils available, only fudex offers 2% and 5% solution and 5% cream formulations—formula- ions that have proved effective in the treatment of these mutliple lesions.

Jsual duration of therapy, 2 to 4 weeks.

tudies showed that with the 2% and 5% Efudex preparations, the usual uration of therapy was only 2 to 4 weeks.[5] Other studies with topical uorouracil revealed that when concentrations of less than 2% were sed, significant numbers of lesions recurred.[6]

'reats the lesions you can't see, too.

Jumerous lesions, not apparent prior to 2% and 5% Efudex therapy, ıanifested themselves by definite reactions, while intervening skin emained relatively unaffected.[5] The early eradication of these subclini- al lesions (which may otherwise have undergone further progression) robably accounts for the reduced incidence of future solar keratoses in atients treated with topical fluorouracil—especially with 5% ɔncentrations.[6]

Iow to identify solar keratoses.

'ypically, the lesion—a flat or slightly elevated brown to red-brown apule—is dry, rough, adherent and sharply defined. Multiple lesions re the rule.

'redictable therapeutic response.

'he response to a typical course of Efudex therapy is usually haracteristic and predictable. After 3 or 4 days of treatment, erythema egins to appear in the area of keratoses. This is followed by a moderate ɔ intense inflammatory response, scaling and occasionally moderate enderness or pain. The height of this response generally occurs two /eeks after the start of therapy and then begins to subside as treatment ; stopped. Within two weeks of discontinuing medication, the ıflammation is usually gone. Lesions that do not respond should e biopsied.

'eferences: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, rune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T, and Honeycutt, W. M.: 'Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *'harmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, . 92. 3. Belisario, J. C.: *Cutis*, *6*:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, *97*:14, 1968. . Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and lein, E.: *Cancer*, *25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

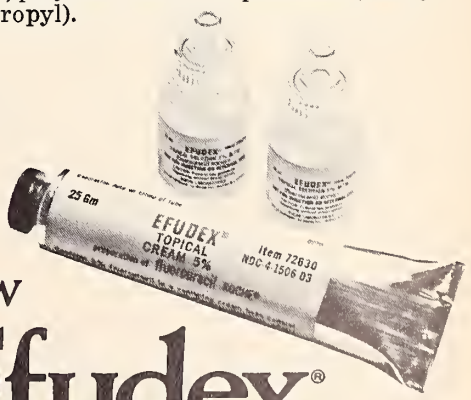
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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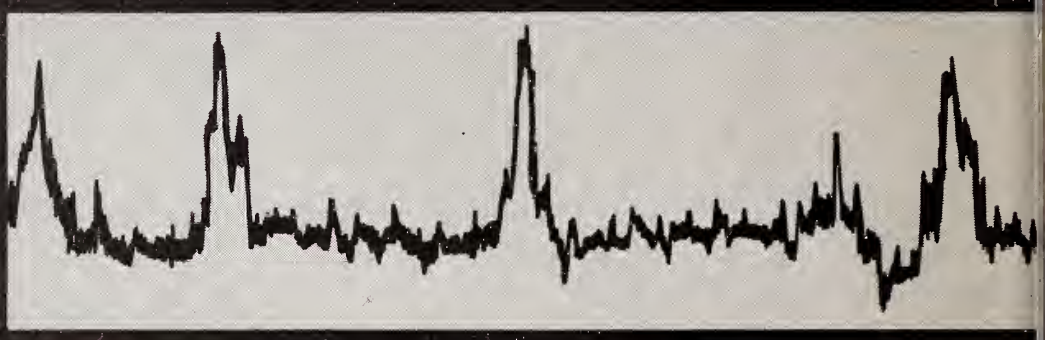
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Published monthly by The Arizona Medical Association, Inc., with offices at 810 W. Bethany Home Rd., Phoenix, Arizona 85013. Subscription $5 a year, single copy 50 cents. Second class postage paid at Phoenix, Arizona, and at additional mailing offices.

The Original Articles and Editorials of ARIZONA MEDICINE are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

An intestina autobiography of rage contentmen and horro

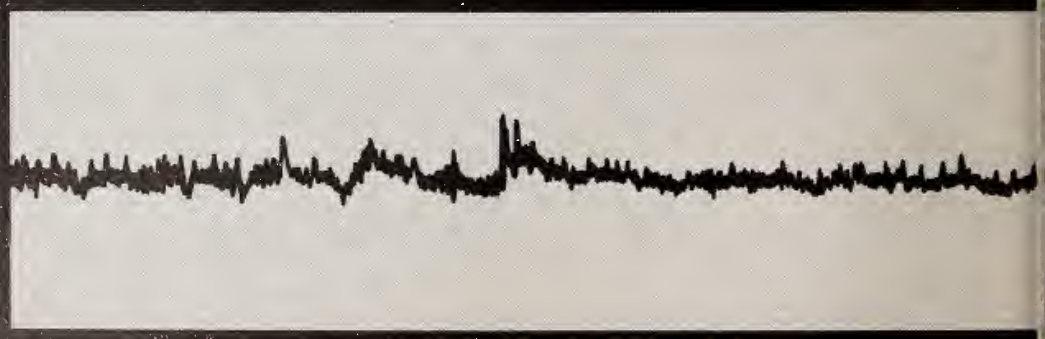
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He was overwhelmed by "paralyzing horror" when told he would need a partial laryngectomy for removal of an early carcinoma; "...the activity of the ileum virtually ceased for over a five-minute period..."*



Background

*Data presented here derive from a 13-year ongoing study by Henry Harrison Sadler, M.D., and Aline Underhill Orten, Ph.D., at Wayne State University. Their findings, which demonstrate a correlation between the emotional state of a human subject and the motility of an isolated segment of his ileum, were published in the April, 1968, *American Journal of Psychiatry*, volume 124, page 1375.

The subject is a 56-year-old man with a Thiry loop of ileum created as a result o emergency surgery. A person of modes attainment and simple tastes, the subje depends on the investigators as he migh own family. His full-time job is as a "hu laboratory," and throughout the 13-year of the study, he has taken great person in his own participation.

A story charged with emotion

The graphs on the facing page are intestinal motility readings on a human subject experiencing the emotions of rage, contentment and horror (see "Background" below left). This "intestinal autobiography" dramatizes the point that certain emotions correlate with specific patterns of G.I. motility.

The visceral clutch and functional G.I. disorders

The gut response to stress has been amply demonstrated in many functional G.I. disorders. Nervous diarrhea and irritable colon syndrome, for example, are disorders associated with abnormal G.I. motility. And these disorders are commonest among patients sensitive to life-stress situations productive of conflict and excessive anxiety.

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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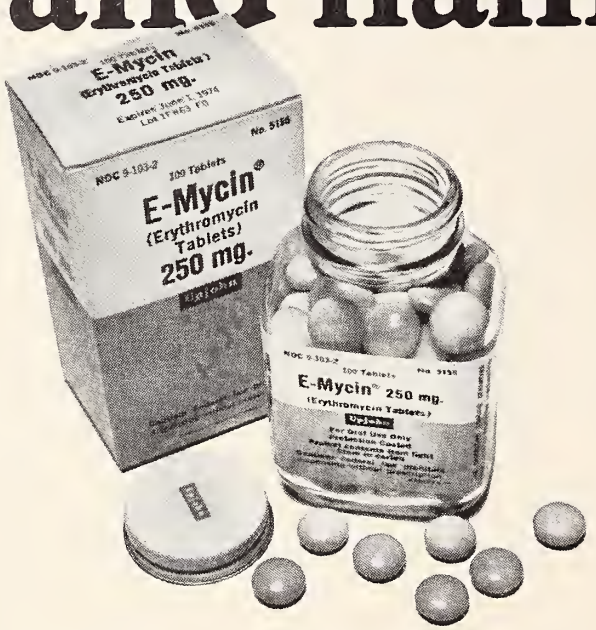
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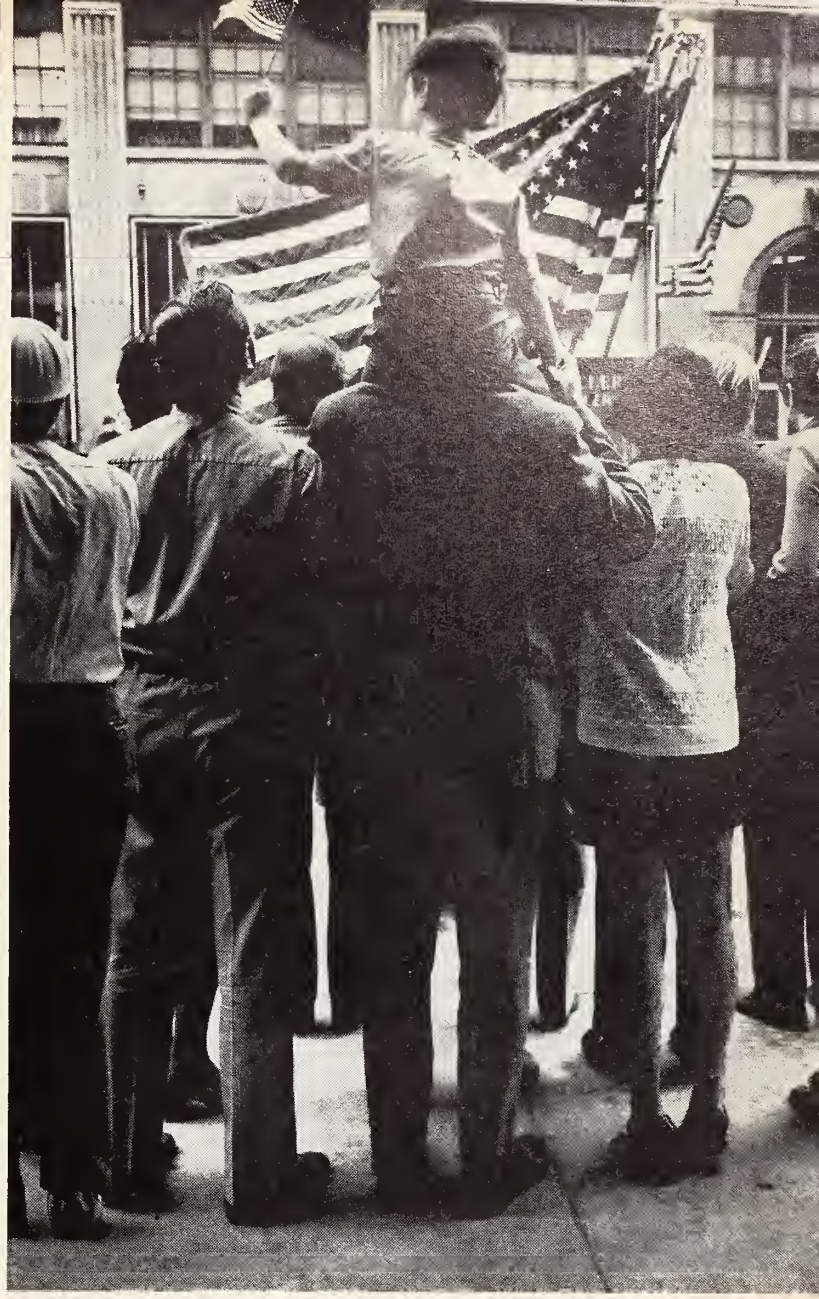
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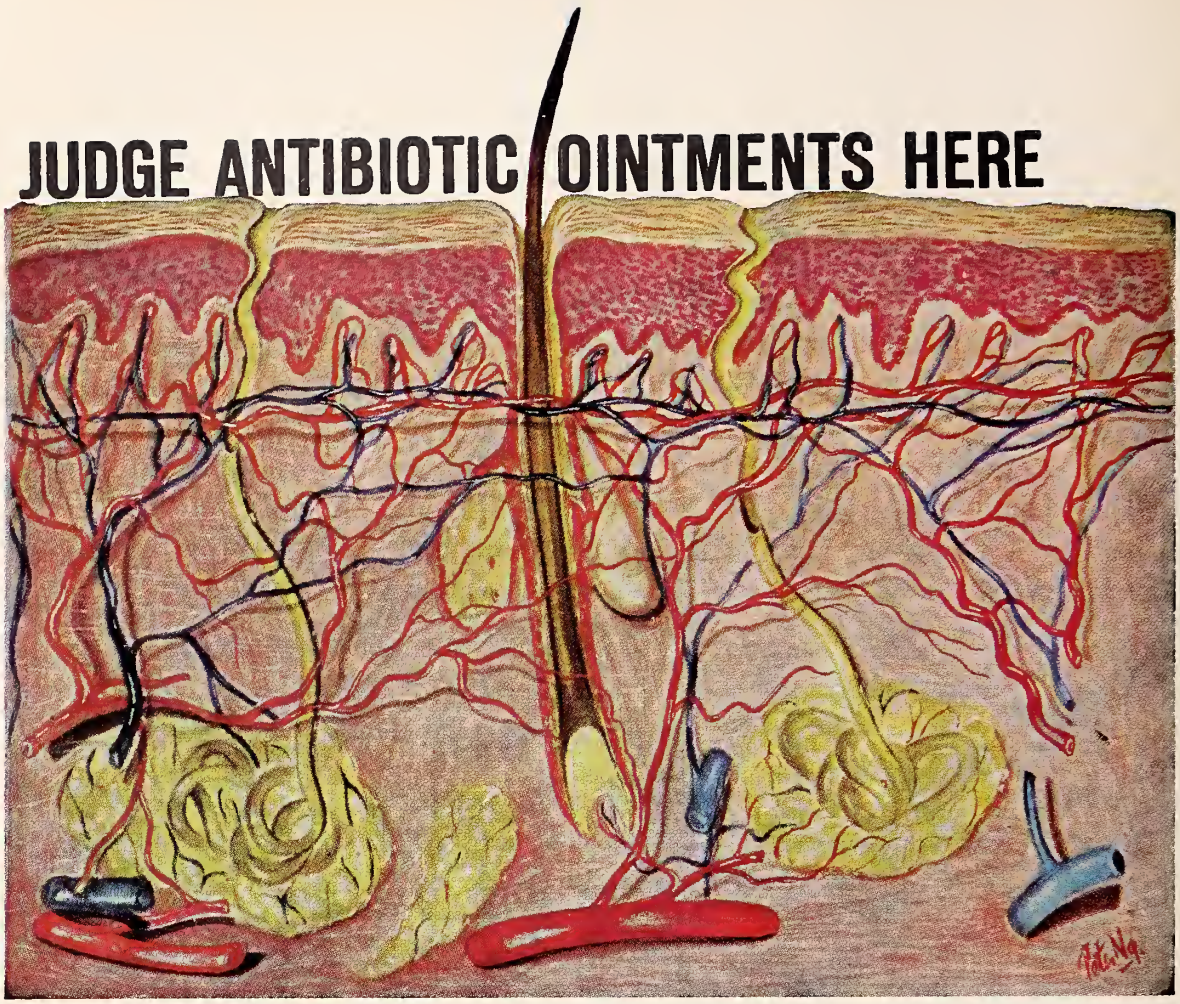
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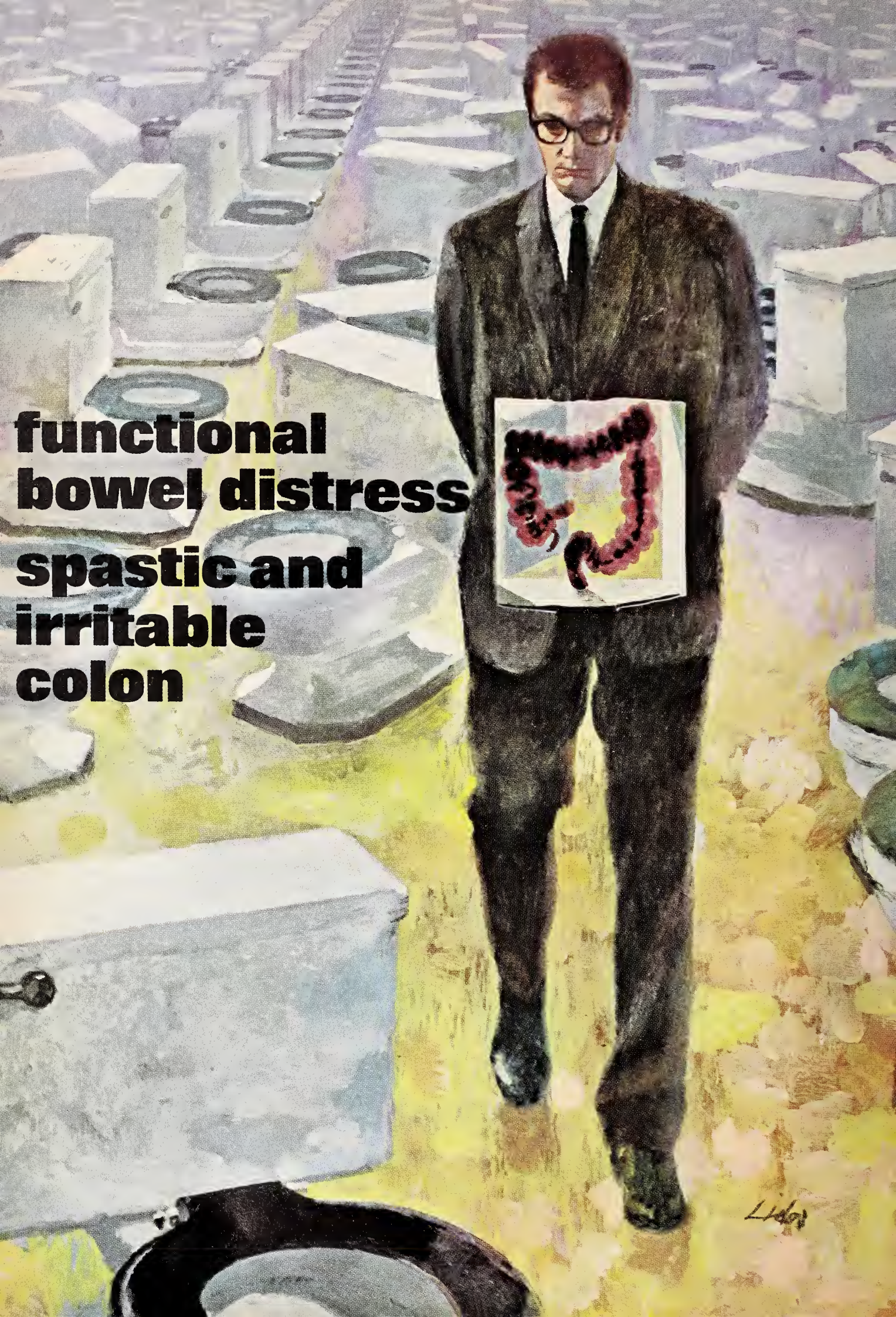
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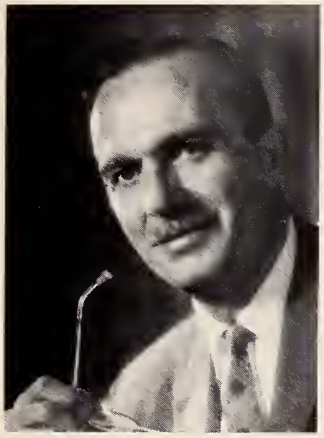
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AZTEC MEDICINE

WITH COMMENTS ON MEXICAN NEUROSURGERY

When Hernan Cortes and his band of 553 Conquistadors arrived in Veracruz in 1519 the Aztecs ruled a mighty civilization that extended from the Gulf Coast to the Pacific Ocean and from Honduras and Nicaragua in the South to the Southwestern United States in the North. It is believed that the Aztecs, like the other Indian tribes, migrated into North America across the Bering strait and arrived in this mile and a half high valley in 1168 AD. According to legend the wandering tribe had chosen this site when they saw an eagle with a rattlesnake in its mouth perched on a nopal cactus growing on a rock. Their priests had foretold that this was the site on which they would build their capital, Tenochtitlan.

At first the Aztecs lived in a most primitive manner, barely subsisting on whatever food they could find. They hired themselves out as mercenaries to neighboring tribes and by the early 14th century had become a formidable military force which speedily conquered and annexed neighboring tribes and absorbed and improved their cultures.

Huntington Institute of Applied Medical Research, 734 Fairmount Avenue, Pasadena, California 91105.

*Presidential Address. Meeting of American Academy of Neurological Surgery. Mexico City, November 18-21, 1970.

Tenochtitlan reminded Cortes and his soldiers of Venice. It was a magnificent city located in the center of a lake, threaded with canals and reached by long, broad stone causeways. Hundreds of temples, palaces and other buildings, many of which were flamboyantly colored were noted. There were beautifully landscaped country villas with pools and fountains. Their art works were outstanding, their markets stocked with a large variety of items and their scientific progress almost unbelievable.

The political structure of the Aztecs bore a strong resemblance to Imperial Rome. The emperor was all-powerful. He was counseled by tribal leaders and personal advisors. At his death his successor was chosen from his eligible male relatives on the basis of merit.

The judicial system protected the rights of all individuals. In contrast with the European system where women were usually mere chattels of their husbands, Aztec women had equal rights.

Education, arts, sciences and the professions were dominated by the Aztec priesthood. The priests served as historians, scribes, mathematicians, astronomers and astrologers. In the sci-

ences they functioned as teachers, practitioners and research workers. Outstanding among their many contributions was their calendar which in their 52 year cycle was within 11 minutes of absolute astronomical exactitude.

Much more could be said about Aztec science and culture but our concern is with Aztec Medicine. Our knowledge of this is based on manuscripts that survived the book-burnings ordered by the Spanish conquerors. Most important among these are the Badianus and Sahagun manuscripts.

The Badianus manuscript was written in 1552 by two Aztecs who were educated by the Franciscans at the College of Santa Cruz. It was first written in the Aztec language on loose sheets by Martinus de la Cruz and immediately translated into Latin by Juannes Badianus under the title "Libellus de Medicinalibus Indorum Herbis." This beautiful little volume bound in Crimson velvet was discovered in the Vatican Library in 1929 by Clark and Thorndike and subsequently translated into English by Dr. Emily Walcott Emmart. The English edition was published by the Johns Hopkins Press in 1940.[2]

The Sahagun manuscripts are the work of Fray Bernardino de Sahagun who is considered to be the true father of the history of medicine in Mexico. Fray Bernardino was a teacher at the College of Santa Cruz. Apparently he was away at the time de la Cruz and Badianus were writing the Aztec herbal and was unaware of this manuscript. His first books were religious and historical tracts which have preserved the history of the pre-conquest period. However in the great plague of 1546 he developed the disease (either smallpox or typhus) and following his recovery focused on Aztec medicine. He gathered a group of native physicians about him and wrote extensively on native remedies and treatments. The manuscript was completed in 1585 with the text in both Nahuatl and Spanish. Subsequently it was translated into English.[6]

Additional knowledge of Aztec medicine is contained in the letters of Cortes to Charles V and the historical accounts of Acosta, Oviedo and the classic history of Bernal Diaz del Castillo. Mexican medicine was introduced into Europe by the various publications of Nicolas Monardes during the latter part of the 16th century. Monardes, a physician of Seville, never came to the New World but gathered his information from ship's captains, travellers and missionaries and by correspondence with many individuals in New Spain.

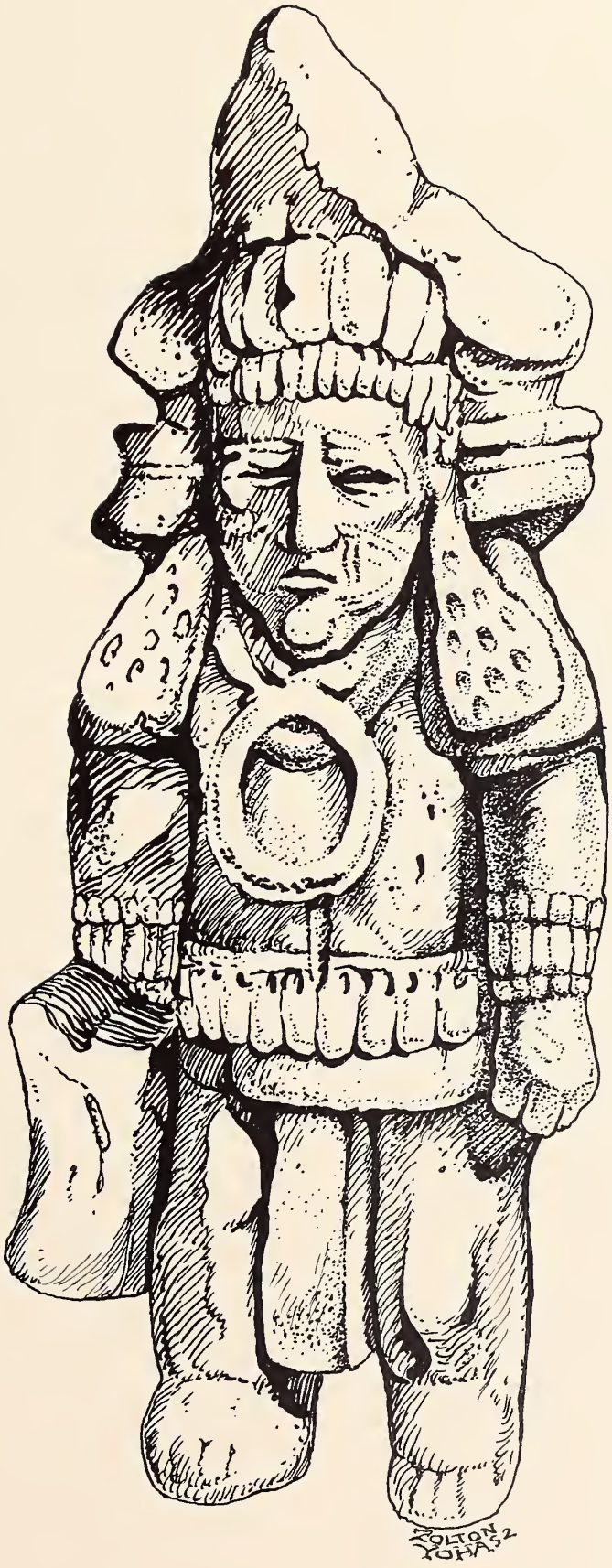
Although these documents are an invaluable source of information they do not present the true picture of Aztec medicine. Dibble and Anderson[6] point out that the Spanish impression of the Aztecs' knowledge of anatomy and their medical practice was based on interpretation from the available 16th century medical vocabularies. It is also apparent that the Aztec physicians differed in their management of medical problems.

Medicine, as practiced by the Aztecs, was inseparably linked with religious ideas. Various gods presided over different diseases and medical specialties, even over sleep and dreams. Mendieta wrote in 1590 that "when called to cure a patient the (Aztec) physician used herbs and applied some remedies if the ailment was of minor importance, but if the disease was acute and dangerous he would tell the patient "you have committed a sin." Psychotherapy and religious rituals, therefore, supplemented the use of indigenous materia medica.

Despite this emphasis on the supernatural origin of disease the Aztecs recognized that diseases could be transmitted by other media, particularly through the air. They made extensive use of incense to ward off airborne diseases. When Montezuma and his courtiers greeted Cortes and his army on their arrival in Tenochtitlan, attendants carried censers and filled the air with incense. The Spaniards thought this a mark of esteem but the Aztecs were only protecting themselves.

It is difficult to evaluate the prestige of the physician (Figure 1) in the Aztec social structure. More than likely it is a question of the standards by which they are judged. Cortes requested Charles V not to allow physicians to come to Mexico because the dexterity and knowledge of the native doctors made it unnecessary. Both the Emperor and the Pope dispatched emissaries to learn everything possible about Mexican materia medica. According to Carrington[1] the Aztec doctor was as respected as were the high priests. However, another modern authority, Francisco Guerra states that male and female physicians had little prestige and in modern times would be classified as blue collar workers.

The Aztecs had two categories of physicians.


ZOLTON
TOMAS 2

The one group comprised the Tepati who were the legitimate physicians and the other the Ticitl who would be comparable to the witch doctor, sorcerer or medicine man in existing primitive societies.

Both men and women were trained as physicians in an apprentice system. Sons were commonly apprenticed to their physician fathers. Men started to practice at a younger age than women. The latter engaged in medical practice only after the menopause because menstruation and parturition were considered bodily impurities. A certain degree of specialism existed in medical practice. Among these specialties were internal medicine, surgery, midwifery, phlebotomy, pediatrics, pharmacy and dentistry.

ANATOMY

In Book 10, Chapter 27 of the Sahagun codices there are descriptions of the parts of the body and their properties. A considerable number of anatomical terms and descriptions of attributes are noted for surface anatomy and for muscles, bones and joints. Much of this knowledge came from their practice of flaying sacrificial victims. Although they had some knowledge of visceral anatomy it was rather limited.

The Nahuatl name for the brain is quatextli and its attributes are listed as white or very white, fine textured or very fine textured, moist and cold. Nerves (tlaloatl) are noted to be strong and thin and "all the nerves we are bound together with."

INTERNAL MEDICINE

The Aztec internist made extensive use of medicinal plants. The latter were gathered throughout the empire and planted in large botanical gardens. The Badianus manuscript mentioned 251 plants and illustrates 185 of these in color. Hernandez, who wrote in the latter part of the 16th century, compiled a list of almost 1200 plants.

The physicians were encouraged to use prisoners to determine the physiological effects of plant ingredients. Many of them had analgesic, sedative, antiemetic, antispasmodic, anthelminthic and other therapeutic properties. A list of the active ingredients of these plants that are in current use is presented in Table I. It is noteworthy that many of these plant extracts were being used by eclectic physicians who enjoyed great popularity in the United States at the turn of this century.

The hallucinogenic properties of certain mushrooms were well known. The Aztec expression for a vain, haughty and presumptuous person was "he mushrooms himself." A powder called yiauhtli or yoyotli, obtained from the plant thebetis yoyotli, had ataractic properties. It was blown into the faces of sacrificial victims for inhalation and calmed their fears.

As noted previously the treatment of the patient was not limited to the use of plant extracts. This can be illustrated by this quotation from the Badianus manuscript concerning the treatment of skull fracture:

> "Herbs that spring up in the summer, wet with dew, ground up in the blood of a punctured vein and white of egg with emerald, pearl, crystal and bezoar stone of the huatzin, (a small native bird) and little earthworms, are to be smeared on the fractured head; when there is no blood found, burned frogs will serve."

TABLE I

Some Active Ingredients in Aztec Remedies

Atropine	Damianin
Hyoscine	Tannic Acid
Hyoscyamine	Balsam
Santonin	Copal
Sarsaponin	Tolu
Lobeline	Diosgenin
Theobromine	Salicin
Caffeine	Quinine
Alcohol	Mescaline
Saponins	Papain
Ascaridol	Emetine
Condurangin	Cascara
Nicotine	Psilocybin
Solandrine	Ipecac
Jalap	Curare

SURGERY

The Aztec surgeon's knowledge of external and superficial anatomy enabled him to become skillful in the treatment of wounds, the setting and immobilization of fractures and in draining abscesses. There is no evidence that he performed any thoracic or abdominal operations. Their surgical instruments were fabricated from obsidian, wood and thorns.

Aztec surgeons were superior to their European counterparts in the treatment of wounds, particularly those resulting from warfare. Wounds were cleansed with water and astringents and closed with interrupted sutures, oftimes human hair, and dressed immediately with a latex type of material. Open wounds with infected granulation tissue were irrigated with the juice of papaya and other plants. They were considered reasonably skilled in the setting and immobilization of fractures. Immobilization was

accomplished either by applying four wooden splints surrounded by bandages or by applying a cast made from feathers, gums and resins. In the Sahagun codices there is a most interesting description of an "intramedullary nailing technique" as follows:

> "And if one is very sick and his body is much fevered and the bone is exposed, a very resinous stick is cut, inserted within the bone, bound within the incision, covered with the medicine mentioned."

It is questionable whether the Aztecs trephined skulls. Schendel[7] states "the outstanding surgical procedure performed by the Aztecs . . . was trepanation." The procedure was allegedly used to elevate depressed skull fractures and to release "evil spirits" in the epileptic or insane person. Their technique is said to have differed from that used by the Incas. It consisted in punching a series of small holes in the skull surrounding the area to be removed, cutting between the holes and lifting out the section of bone or the depressed fragments. Guzman West[5] states, however, that trephination of the skull was no longer practiced at the time of the Spanish conquest and that all of the trephined skulls found in Mexico belong to the periods between 600 B.C. and 1000 A.D.

Other surgical procedures consisted of dissection and removal of pterygia from the eye with instruments fabricated from thorns. Some authors have stated that they removed cataracts but Guerra[4] notes that in the treatment of cataracts and corneal opacities they used scatalogical procedures which could only have led to violent inflammation and blindness.

DENTISTRY

Dentistry as practiced by the Aztecs involved several procedures. Teeth were filed and inlayed with precious and semi-precious stones for cosmetic purposes. There is no evidence that cavities were drilled or filled.

In the Badianus manuscript it is said that teeth were extracted after applying a substance consisting of the ashes of a burned iguana, rattlesnake venom and vinegar. In his recent book Schendel[7] mentions that in modern times itinerant Mexican Indian dentists apply a secret substance to the teeth of their patients and extract them painlessly.

OBSTETRICS

Obstetrics was practiced by midwives. They would remain with the parturient woman during the latter part of her pregnancy. Bathing of the patient and certain rituals were employed. They were considered to be quite skilled and practiced such procedures as external version and embryotomy.

PUBLIC HEALTH

The Aztecs were fastidiously clean in their habits of daily living. They are said to have bathed and changed their clothing frequently. Sauna and mineral baths were very popular. They brushed their teeth with a mixture of wood ashes and honey, used deodorants and perfume.

Their water supply was derived from springs in the Chapultepec Hills and flowed into the city in an aqueduct several miles in length. It was piped into the larger homes and into public fountains where inhabitants could fill their clay jars.

Human excreta was collected and transported by barges to farms where it was used as fertilizer. Public latrines were placed in strategic places. The streets were swept and watered daily by a large corps of street cleaners.

The government established hospitals for veterans throughout the empire and staffed them with physicians and surgeons. These hospitals also served as regional centers for providing assistance to the poor. Quarantine was employed in the presence of transmissable disease. However, individuals with incurable or contagious disease were frequently turned over to the priests for sacrifice. Deformed children and adults were housed and displayed in a compound adjacent to the Imperial Zoo, a custom reminiscent of the old circus side-show. While some might consider this cruel it should be remembered that at this time the deformed and crippled in Europe were considered outcasts unless they were fortunate enough to become members of a royal court.

MEXICAN FIRSTS IN MEDICINE

It was mentioned previously that there were no Spanish physicians attached to Cortes' army. They began to arrive after the Conquest. Tenochtitlan had been razed and the construction of the new city in Spanish style was begun and continued at a feverish pace using native laborers.Hospitals were constructed and were operated by the priests who enlisted the aid of the native physicians. Medical practice soon became a fusion of Aztec and Spanish medicine

which had its advantages and disadvantages.

The stage was now set for the development of the many medical "firsts" in Mexico (Table II). By 1524 the first hospital on the American continent, the Hospital de Jesus, was in operation and continues to this day. In his will Cortes arranged for the perpetual endowment of this institution and stipulated that the patron and head of the hospital was to be a direct descendant of himself.

TABLE II

Mexican "Firsts" in Western Medicine

General Hospital	1524	Hospital of Jesus
Leprosarium	1526	Hospital de Tlaxpana
Public Health Service	1527	Mexico City
University	1547	University of Mexico
Medical Examinations	1553	University of Mexico
Mental Hospital	1566	Hospital de San Hipolito
Medical Textbook	1570	"Opera Medicinalia" —Bravo
Autopsy	1571	Dr. Lopez Hinojosa y H
Chair of Medicine	1579	University of Mexico
Medical Journal	1739	Jose Bartolache
Caesarian Section	1779	Franciscan Friars

There has been some controversy concerning the establishment of the first university in the Americas. Was it in Mexico or Peru? In his book entitled "La Real y Pontificia Universidad de Mexico 1536-1865" Careno proves that Phillip II issued a proclamation on April 30, 1547 establishing the University of Mexico. The University of San Marcos in Lima, Peru was founded by the same king on May 12, 1551[3]

In medical teaching there is also a Mexican priority. The University began medical examinations in 1553 and the Chair of Medicine was formally established in 1559. The chair of medicine was not established at the University of San Marcos until November 1634.

Other Mexican "firsts" include the first leprosarium, mental hospital and government council regulating medical practice. The first medical text written and published in the Americas was "Opera Medicinalia" by Francisco Bravo. Members of this Academy will be pleased to learn that in 1591 Juan de Cardenas published a book entitled "Primera parte de los problemas y secretos maravellosos de las Indias."

The first caesarian section in the New World was performed by two Franciscan friars. Jose Ignacio Bartolache, a famous doctor and mathematician, born in 1739, established the first medical magazine.

MEXICAN NEUROSURGERY

In closing I would like to pay tribute to our Mexican colleagues by commenting briefly on the development of neurological surgery in Mexico. I am indebted to Juan Cárdenas for this information. In reviewing the last 80 years of neurological surgery in Mexico Dr. Cárdenas states that from 1890 to 1930 there were no neurosurgeons in Mexico. Neurologists, such as Dr. Rafael Lucio, made diagnoses of brain tumor. General surgeons treated depressed skull fractures, cerebral fungus and other traumatic conditions.

In 1922 a young general surgeon, Dr. Gustavo Baz, who was one of the first Mexican members of the American College of Surgeons, went to the United States and Europe for postgraduate training in both general surgery and neurosurgery. He returned to Mexico in 1925 to practice general surgery. In 1930 he visited many neurosurgical services in the United States and Europe and following his return to Mexico carried out a large number of neurosurgical operations.

On the basis of this experience Dr. Baz, who later became Minister of Health, sent as many as 500 people, including physicians, nurses, architects and engineers abroad to study not only medicine but the construction of new hospitals.

In 1945 many of the neurosurgeons present at this meeting returned from the United States, Canada and Europe after completing their neurosurgical training. Among these are Doctors Robles, Guzmán West, Sánchez Garibay, Velasco Suarez, Ramón del Cueto, Juan Cárdenas and others. These men founded neurosurgical services in hospitals as well as a neurological institute. They trained many other neurosurgeons and founded the Consejo Mexicano de Cirugía Neurológica which is the equivalent of our American Board of Neurological Surgery. It is apparent that neurosurgery has come of age in Mexico as it has in other countries of Latin America.

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The author is indebted to Mr. John Connor and Mrs. Elizabeth Crahan of the library of the Los Angeles County Medical Association and to Dr. Carl S. Dentzel, Director, and Mrs. Ruth M. Christensen of the Southwest Museum for their assistance in the preparation of this manuscript.

KIDNEY BIOPSY IN CHILDREN

MELVIN L. COHEN, M.D.

MICHAEL J. LIPSON, M.D.

DEPARTMENT OF PEDIATRICS
ST. JOSEPH'S HOSPITAL & MEDICAL CENTER
350 WEST THOMAS ROAD
PHOENIX, ARIZONA 85013

THE FOLLOWING PAPER REPRESENTS AN EVALUATION OF THE PROCEDURE OF PERCUTANEOUS RENAL BIOPSY AS AN ADJUNCT TO DIAGNOSIS (CORRECTLY MADE PRIOR TO THE BIOPSY IN 74% OF THE CASES) AND THERAPY USEFUL IN 6 OF THE THIRTY-TWO SEPARATE INDIVIDUALS. THE AUTHORS HAVE SOME HESITANCY IN RECOMMENDING THIS PROCEDURE IN THOSE CASES WHERE THE DIAGNOSIS IS EVIDENT WITHOUT FURTHER ELABORATE STUDIES. IT IS HOPED THAT A FURTHER REPORT WILL DEAL WITH THE COMPLICATIONS AND DANGERS OF THIS PROCEDURE.

INTRODUCTION

Percutaneous renal biopsy has become rather commonplace in the evaluation of kidney disease. Edelmann and Greifer[1] amassed the experiences of fourteen authors between 1955 and 1965 and found that percutaneous biopsy was successful in 76.5% of 2,593 attempts. The same authors were successful in 97.5% of 200 biopsies in children using fluoroscopic monitoring. The indications for renal biopsy, however, have not been well defined. Kark[2] is of the opinion that "biopsy should be done to evaluate any case of diffuse renal disease in which there are major unsolved problems regarding etiology or in which there is a need to define prognosis or to select or control treatment by study of the histologic changes in the kidney, provided no contraindications exist." Using such reasoning, many academic centers have been rather liberal in order to obtain a large amount of information not always having therapeutic implications. A wealth of information has thus accumulated which can now be applied at the community level, narrowing the indications and assisting in the therapeutic programs offered patients with acute and chronic renal disease. This paper summarizes the pediatric experience in renal biopsy over a two and a half year period at St. Joseph's Hospital & Medical Center in Phoenix, a private teaching community hospital.

MATERIAL AND METHODS

Thirty-three renal biopsies were performed in thirty-two patients in a thirty month period from April, 1968 to September, 1970. The age range was 2 to 16 years. Thirty were percutaneous and three open. The former were performed without fluoroscopic monitoring using the Franklin mod-

ification of the Vim Silverman needle. In most instances two individual cores of tissue were obtained.

After fixation in Zenker's solution, tissues were cut in three micron sections and stained with hematoxylin and eosin (H & E) and periodic acid-Schiff with hematoxylin counterstain (PASH) for light microscopy. At the time of biopsy, a small piece of cortex was placed in a vial containing isopentane and immediately immersed in liquid nitrogen and later sectioned at 4 to 5 microns in a cryostat for fluorescent studies. Immunofluorescent staining was performed with minor modifications of the technique described by Coons and Kaplan[3] using commercially available fluoroscein conjugated antisera to IgG, Beta$_1$C globulin (C'3 component of complement) and fibrinogen* and viewed under a Leitz fluorescence microscope. Electron microscopy was performed on only two occasions and will not be considered here.

The admission diagnoses, listed in Table 1, are grouped in four broad major categories. Idiopathic nephrosis of childhood (lipoid nephrosis) was the admitting diagnosis in 21 (62%3. The indications for biopsy in these patients were as follows:

1. Frequent relapse (26%) — Those patients responsive to steroid therapy but who could not remain off steroids for any reasonable length of time. These patients were considered candidates for eventual steroid toxicity.

2. Steroid resistant (15%) — Those patients in whom adequate prednisone (greater than 2 mg. per kilogram daily for three weeks or more) did not bring about a remission of the nephrotic syndrome.

3. Steroid dependent (6%) — Those patients responsive to steroids, but who could not be withdrawn from potentially toxic doses without relapse.

4. Suspected nephritis (6%) — Those patients having suggestive evidence of nephritis clinically. One of these patients, age 6, had nephrotic syndrome with azotemia, hematuria and a slightly low serum Beta$_1$C complement. The other, age 2, had nephrotic syndrome unresponsive to steroids, with hematuria and a history suggesting a strep-

*Hyland, Division of Travenol Laboratories Inc., Los Angeles, California.

TABLE 1. SUMMARY OF BIOPSY DATA

Admission Diagnosis	Total Number of Each	Biopsy Findings*						Confirmed	Contradicted
		LN	AGN	CN			FN		
				P	M	MP			
A. Idiopathic nephrosis of childhood (lipoid nephrosis)	21	14	2	3			2	14 (67%)	7 (33%)
1. Frequent relapse	9	9						9 (100%)	0 (0%)
2. Steroid resistant	5	2	1	2				2 (40%)	3 (60%)
3. Steroid dependant	2	1		1				1 (50%)	1 (50%)
4. Suspected nephritis	2		1				1	0 (0%)	2 (100%)
5. Age	3	2					1	2 (67%)	1 (33%)
B. Acute glomerulonephritis	3		3					3 (100%)	0 (0%)
C. Chronic (or rapidly progressive acute) nephritis	9		1	5	1	2		8 (89%)	1 (11%)
1. Persistent urinary sediment abnormalities	2		1	1				1 (50%)	1 (50%)
2. Hypocomplementemic	2					2		2 (100%)	0 (0%)
3. Azotemic	5			4	1			5 (100%)	0 (0%)
D. Focal nephritis (asymptomatic persistent hematuria)	1	Normal Biopsy						0 (0%)	1 (100%)
Totals	34	14	6	8	1	2	2	25 (74%)	9 (26%)

* LN — Lipoid nephrosis
AGN — Acute glomerulonephritis
CN — Chronic nephritis
P — Proliferative
M — Membranous
MP — Membranoprolifertive
FN — Focal nephritis

tococcal infection prior to the onset of her disease.

5. Age (9%) — Onset of nephrotic syndrome at an age above which idiopathic nephrosis of childhood is not common. One patient was 8 years, the other two were 13 years of age.

Acute glomerulonephritis prompted biopsy in three patients (9%). Two of these had nephrotic syndrome, but clinically appeared to have nephritis. The other was thought to have acute nephritis superimposed on either chronic pyelonephritis or dysplasia. (This latter patient accounted for two diagnoses, thus giving a total of 34 diagnoses in 33 patients.)

Chronic nephritis or rapidly progressive acute nephritis accounted for nine (26%) admission diagnoses. Clinically two of these patients had prolonged urinary sediment changes and two had persistent hypocomplementemia thought to represent membranoproliferative disease clinically.[4] Of the five uremic patients, three had chronic renal disease, one rapidly progressive acute renal failure, and the other was the patient thought to have acute nephritis superimposed on pyelonephritis or dysplasia.

Asymptomatic hematuria accounted for one patient, thought perhaps to have a focal nephritis as described by Ferris, et. al.[5] and West, et. al.[6]

One patient, a 3 year old boy, was biopsied once for steroid resistant nephrosis, and a second time because of rapidly progressive renal failure.

MICROSCOPIC INTERPRETATION

Tissue was felt to be adequate in all instances. Interpretation of microscopic specimens were made as follows:

A. Lipoid nephrosis (LN) (or idiopathic nephrosis of childhood)
 Either normal microscopic picture or minimal focal mesangial proliferation. Normal basement membranes.

B. Acute glomerulonephritis (AGN)
 Diffuse generalized mesangial, endothelial and (or) epithelial proliferation with or without exudation.

C. Chronic nephritis (CN)
 1. Proliferative (P). Changes as seen in AGN but with hyalinization, sclerosis, interstitial fibrosis, tubular atrophy in widespread portions of the specimen.
 2. Membranous (M). Uniform thickening of the basement membrances in almost all of the glomerular capillary loops.
 3. Membranoproliferative (MP). A combination of proliferative and membranous lesions.
 4. Focal nephritis (FN). Hyalinization, sclerosis, proliferative and (or) membranous changes in portions of normal glomeruli or locally involving whole glomeruli.

These pathologic categories were arbitrarily chosen for this review, and are by no means felt to be all inclusive in defining renal pathology. In general, these broad categories are in agreement with those described in the literature for purposes of diagnosis, prognosis, and guides to therapy.[7]

RESULTS

Table 1 summarizes the pathologic interpretation of the biopsy specimens in relation to 34 admitting diagnoses. The clinical impression was confirmed by biopsy in 25 (74%), and contradicted in 9 (26%). It is obvious that the most diagnostic help was provided in the patients with lipoid nephrosis other than those with simple relapsing disease responsive to therapy. Half of the patients in the other categories of nephrosis, truly had more than "minimal change" nephrosis. No patients with clinical acute glomerulonephritis and only one with chronic nephritis was contradicted by biopsy. The relationship between local nephritis and benign persistent hematuria is one which has been discussed by other authors.[5, 6] Our single case certainly can offer no significant contribution to the larger experience of others.

IMMUNOFLUORESCENCE

Evidence of immunological disease was significantly positive by fluorescence microscopy with fluoroscein conjugated anti IgG and (or) anti Beta$_1$C in nine specimens. (See Table 2). Anti-human fibrinogen was not significantly positive in any case. In no case of clinical idiopathic nephrosis of childhood confirmed by a "minimal change" microscopic picture was there evidence of immune complex deposition. This is certainly consistent with other reports and supports the nonimmunological etiology of this disease.[8, 9]

Five of the 6 acute glomerulonephritis patients had both IgG and Beta$_1$C deposition in the glomerular capillary loops. The single acute nephritis patient with negative fluorescence was a four year old resistant nephrotic with subse-

quent rapidly progressive nephritis and may well fit the category of disease described by Bacani, et. al.[10] since he did not have clinical post-streptococcal nephritis or anti-glomerular basement membrane disease.

The remaining four positive immunofluorescence tissues came from the group of eleven patients with microscopic evidence of chronic nephritis. There were thus seven specimens in this group negative for immunological disease. Analysis of these patients showed that two had resistant nephrosis, one had dependent nephrosis, two were suggestive of familial nephritis, one was probable dysplasia and the other was the rapidly progressive disease referred to previously. Thus, all chronic nephritis patients with negative fluorescence studies were suggestive clinically of nonimmunological disease.

TABLE 2. IMMUNOFLUORESCENCE

	Total No.	Number* Positive	Number Negative
Lipoid nephrosis	14	0	14
Acute GN	6	5	1**
Chronic nephritis	11	4	7**

*Significant capillary loop deposition of IgG and $Beta_1C$
**See text for details

DISCUSSION

The indications for kidney biopsy must be approached from several view points. Certainly prognostically, all biopsies are helpful, provided the tissue is adequate. The differentiation between idiopathic nephrosis and active nephritis can generally be made, as well as the extent of disease processes, but how often will a biopsy alter our approach to therapy? It is understandable that a severely affected kidney microscropically might justify potentially hazardous therapy.

In only six patients the biopsy was directly responsible for the subsequent therapeutic regimen. In these the decision to use or not use steroids, cytotoxic drugs and (or) hemodialysis was dependent on the histologic picture. In the nine patients with relapsing nephrosis the biopsies were routinely performed prior to the institution of cyclophosphamide or other cytotoxins, but probably would not have influenced our treatment regardless of the findings histologically.

From this small number of renal biopsies in children, it is evident that the most help is obtained in nephrotic children who are either resistant or dependent on steroids or are clinically suspected of having nephritis. There probably is also justification for biopsy in nephrotics with late onset. There would seem to be little reason to biopsy children with typical idiopathic nephrosis of childhood who respond and can be withdrawn from steroids, even though relapses are frequent. This latter group are those who have generally responded well to cyclophosphamide,[11] and for reasons of study and follow-up have generally been biopsied prior to the institution of such therapy. We wonder, at times, whether biopsy is truly indicated, since these patients seem to uniformly fit the "minimal change" lesion found in idiopathic nephrosis of childhood. If we exclude this large number of patients with simple relapsing nephrosis, analysis of the remaining twenty-five admitting diagnoses reveal that six or 24 percent of them have benefited therapeutically by biopsy.

SUMMARY

Thirty-three renal biopsies were performed in thirty-two children from ages 2 to 16 years with diagnostic kidney problems. Routine studies included light microscopy and immunofluorescent microscopy. Of thirty-four initial cliincal impressions, nine (26%) were contradicted by biopsy. No diagnostic aid was obtained in all nine patients with simple relapsing "lipoid nephrosis," merely confirming the impression of "minimal change" nephrosis. Therapy was significantly influenced by biopsy is six (24%) of the remaining twenty-five. Immunofluorescent studies generally confirmed the clinical and microscopic impression of immunological disease.

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INDICATIONS FOR EXTRACRANIAL VASCULAR SURGERY IN THE TREATMENT OF STROKE

RICHARD A. THOMPSON, M.D.

INTRODUCTION

Stroke is a disease of serious proportions in our community. Unfortunately specific therapy which is truly effective for the stroke victim is severely limited. Possibly this is the reason for the gradual increase in medical practitioners' interest in extracranial vascular surgery in the treatment of stroke. It appears to offer a direct method of attack on the presumed cause of stroke.

Any practitioner advising surgery on extracranial vessels in the treatment of strokes should be aware of the evidence regarding this method of therapy because there is serious doubt that extracranial vascular surgery in the treatment of stroke offers the patient any better prognosis than medical management alone except in certain instances. In the following paragraphs, the data regarding extracranial vascular surgery and medical management of stroke are critically reviewed, and in the discussion, certain conclusions and recommendations are offered.

REVIEW OF UNCONTROLLED SURGICAL STUDIES

Because of his prestige, the work of De Bakey, et al,[1] has received the greatest attention and is the most frequently quoted in the justification of vascular surgery for the treatment of stroke. De Bakey's papers should be critically reviewed by any doctor recommending extracranial vascular surgery for stroke. The 1965 report was based on the study of 812 patients who had extracranial vascular surgery. Patients were classified as transient cerebral ischemia, persistent progressive stroke, or completed stroke. There was no further description of these categories, and there was no system for grading the seriousness of the stroke. For example, under completed stroke the patient may have had simply a visual field defect which did not cause any incapacitation, or he could have had a massive hemiplegia causing total and permanent disability. No specific criteria for excluding patients from surgery were published.

Vascular surgery was performed upon forty-eight patients "who had little or no neurologic disturbance but had other manifestations of occlusive lesions of the extracranial arterial bed such as ear noises, pulse, blood pressure changes, or murmurs in the neck. . . . The remaining (764) patients had neurologic manifestations ranging from vertigo, visual disturbance and mild motor and sensory changes to complete hemiplegia, aphasia, and coma."

From the Division of Neurology, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, 350 W. Thomas Road, Phoenix, Arizona 85013.

Patients ranged in age from 20 to 85 years. Heart disease including remote myocardial infarction, angina pectoris, and congestive failure was present in 19% and did not appear to be a specific contraindication. Likewise, hypertension was present in 52%. Significant vascular disease in other arteries such as renal vascular disease was present in 52%. Other vascular surgery was performed in 27%, either before or after extracranial vascular surgery.

Therefore, De Bakey, et al, recommended vascular surgery prophylactically as well as for treatment of all types of stroke under a wide variety of circumstances if "extracranial segmental occlusive lesions" were present. He presented a number of tables supporting his conclusions, but these will not be reviewed at this time.

The chief and most important criticism of their work is that the study did not contain a control group. It is a well-recognized principle in medical investigation that controlled studies provide the only methods of obtaining valid comparison groups for the evaluation of a method of therapy. Lacking a control group, any assertion that a certain number of patients are improved or asymptomatic at a specific time following treatment is meaningless. Under the circumstances of the study and with the selective processes involved, how is one to know that the same group of patients would not have done equally well without vascular surgery?

They reported that 32.4% of surgically treated patients had died by an average follow-up of five years. This figure apparently included surgical mortality. This mortality figure is no better than a non-surgical group followed by Marshall[2] and discussed later in this paper.

De Bakey, et al, also found the highest mortality from surgery during the acute phase and raised the question of the advisability of surgery on an acute stroke patient. The cause of this mortality from surgery during the acute stages was not clear, but they indicated that cerebral hemorrhage occurred "with an incidence of less than one percent."

The danger of operation during the acute phase is substantiated by Wiley, et al.[3] They reported nine patients who had surgical correction of carotid occlusion during the acute stages of stroke. Five of these nine patients experienced rapid clinical deterioration following surgery which was secondary to intracranial hemorrhage. Therefore, over half the patients operated during the acute stages had cerebral hemorrhage. It was postulated that the hemorrhage resulted from revascularization of an infarcted area at a time when the blood vessels were too friable to tolerate the pressure, leading to hemorrhage. In Part IV of the Joint Study,[4] it is revealed that surgery during days 0-13 after a stroke resulted in a 42% mortality (21 out of 50).

Other examples of uncontrolled studies can be cited. In 1963 Whisnant, et al,[5] presented the results of surgery on 35 patients. At six to forty-two months follow-up they found 66% of their patients normal. They had experienced an operative mortality of 8.5%. These results were then compared to a completely separate group of non-surgical patients who had experienced a high rate of cerebral infarction and death following the initial presenting stroke. At first glance, the surgical results appear quite favorable in comparison with this second group until it is realized that this type of comparison is invalid for the same reasons stated above.

In 1964 Young, et al,[6] reported on a study of 100 patients. It was concluded that "the ideal patient for surgical treatment is the one who has symptoms of transient cerebral ischemia, preferably without neurologic deficit, whose angiogram demonstrates one or more operable extracranial vascular lesions." Their study had revealed that 90% of their transient ischemic attack patients became asymptomatic or had improvement. There was no control series in their group. It is of interest that they considered their results poor in remote stroke, progressing stroke, acute stroke, and complete occlusions. They had good results with the subclavian steal syndrome. Of five asymptomatic patients operated for prophylactic purposes, "one patient died of a myocardial infarction that occurred the day of surgery," leaving that category with a 20% mortality figure.

In 1968 at the Sixth Conference on Cerebrovascular Disease in Princeton, Drake, et al,[7] reported what they considered to be favorable results from their study of endarterectomy for patients with dementia and bilateral carotid artery stenosis. They obtained reasonably good surgical results from some patients in a group of fourteen private patients, for which no control group was available. However, in the same paper no difference could be demonstrated in results of eleven surgically treated VA patients, compared to ten nonsurgically treated control

VA patients. Therefore, one series of patients with adequate controls revealed no benefit from surgery. Conclusions were drawn only from data showing favorable results. Their report demonstrates again the hazard in interpreting data without adequate control groups.

REVIEW OF MEDICAL STUDIES

In 1967 Bradshaw and Casey[8] published an evaluation of medical treatment in stroke patients with carotid stenosis or occlusion. Their patients tended to be a highly selected group of better risk individuals. In this group of 24 patients with carotid artery stenosis followed from one to eight years, they found 65% with little or no disability. They pointed out that this result was better than one reported group treated surgically (for which reference was provided). Their analysis of 23 patients with carotid occlusion revealed that 45% did well and again pointed out that this was better than three reported series of patients treated surgically (for which references were provided).

In 1966, as mentioned before, Marshall[2] published a study of the management of carotid occlusion and stenosis. He discussed at length the need for controlled studies and published data on 72 personal cases. His data cannot be easily compared with other series. As noted earlier, his series reveals a high percentage of death in longterm follow-up (34% of stenosis and 40% of occlusion). This has been a common observation in studies of stroke patients.

In 1968 Marshall and Meadows[9] published data on amaurosis fugax, a selected type of transient ischemic attack. They found that amaurosis fugax is a relatively benign condition in which 84% of his patients never suffered any permanent disability (amblyopia or hemiplegia). One must conclude that endarterectomy could not improve upon these results.

CONTROLLED SURGICAL SERIES

There are no substitutes for well-controlled, objective studies. The need for these cannot be disputed whenever one deals with a therapy that does not uniformly yield a cure and when the nature of the therapy naturally selects the better risk patients. In 1966 Bauer, Meyer, Gotham, and Gilroy[10] published preliminary data on 183 patients from the joint study described below. This was a well-controlled, randomized study of surgical treatment of cerebrovascular disease. The study involved only patients who were judged suitable for endarterectomy. They were randomly divided into surgical and nonsurgical groups.

After a period of 24 to 42 months follow-up, the data were analyzed in regard to the patients who were improved, unchanged, worsened, or dead. There were virtually no differences in these four categories between 38 patients treated surgically and 40 treated nonsurgically. They found that the surgical group had a slightly higher initial mortality than the nonsurgical group, whereas the latter had a slightly higher late mortality. This resulted in essentially the same mortality for both groups over a longterm follow-up. Definite conclusions regarding the benefit of either form of treatment were not possible because of the lack of significant numbers of patients in each group.

In April of 1969 part three of the joint study of extracranial arterial occlusion was published.[11] It involved a controlled study of longterm survival in both surgical and nonsurgical patients randomly selected as described above. It required analysis of 1,225 patients to obtain statistically significant data. This is an indication of the difficulty in ascertaining the possible benefit of endarterectomy.

Their data was reported only in regard to longterm survival. Patients were classified, both according to clinical course, and admission clinical neurologic examination. In regard to classification by clinical course, the patients were divided into groups A and B. The composition of Group A was "(1) those who showed complete neurological recovery within 24 hours, commonly known as transient ischemic attack (T.I.A.), (2) those who eventually had complete recovery, although not within 24 hours, and (3) those who had an incomplete recovery and were left with a residual neurologic defect. The degree of residual neurologic deficit is not well defined when using this classification by patient's clinical course. A review of a substantial number of the individual source documents does reveal that the majority of these patients did not have a severe deficit." Group B was comprised of patients who had non-transient strokes and were left with relatively severe neurological deficit. Transient ischemic attack had occurred in 25% of this group prior to developing a severe neurologic deficit.

This controlled study revealed that total sur-

vival for all categories of storke is generally better in the nonsurgical group. 'At the 42 month interval there is a 68% cumulative survival rate in the nonsurgical group as compared to 61% in the surgical group."

Endarterectomy on Group A patients (those with transient or only mild neurological deficit) did essentially as well as medically treated patients. Again, as observed previously, patients in the group with mild neurologic deficit having surgery had a slightly higher initial mortality and a somewhat lower subsequent mortality, with the longterm effect being essentially the same in the surgical and nonsurgical groups.

Endarterectomy on Group B patients (those with severe neurologic deficit) was associated with only a 48% cumulative survival rate at 42 months, whereas the comparable nonsurgical group had a 71% cumulative survival rate at 42 months. This difference was significant against surgery at the one percent level.

The data were analyzed in regard to the pattern of carotid lesions, with no attempt being made to analyze lesions of the posterior circulation or great vessels. The patterns of lesions found in the carotid arteries were classified into four categories: (1) Unilateral Stenosis, (2) Bilateral Stenosis, (3) Unilateral occlusion, (4) Unilateral Occlusion, contralateral stenosis.

Only in the category of unilateral stenosis in Group A (patients with transient attack with either full or nearly complete recovery) was survival in the surgical group better than in the nonsurgical group. It was found at 42 months that the cumulative survival rate was 81% for the surgical group, as compared to 64% for the nonsurgical group. This 17% difference was significant at the five percent level.

However, in this same category of unilateral stenosis in patients in the B group, (with severe neurologic deficit) nonsurgical patients had a cumulative survival rate at 42 months of 76%, while patients having surgery had a cumulative survival rate of only 47%. This result was also significant at the five percent level.

All other combinations of arterial lesions, regardless of the type of clinical classification of the patient, either did not improve or became worse after endarterectomy. When considering unilateral stenosis and contralateral occlusion, endarterectomy on patients with severe neurologic disease was associated with very poor results compared to medical management, whereas there was little difference between surgery and nonsurgical on the groups with minimal neurologic deficit. This poor result was "regardless of whether surgery was performed on the occluded artery, on the stenotic artery, or on both arteries." Cumulative survival rate for patients in this category with severe neurologic deficits was only 24% for patients having surgery, whereas the comparable medically treated group had a cumulative survival rate of 89%.

In patients with bilateral stenosis or unilateral occlusion, there were no significant differences between surgical and nonsurgical treatment. It should be noted, however, that unilateral carotid occlusion is associated with excellent survival regardless of the therapy. Cumulative survival rate at 42 months in Group A was 90% with no surgery and 86% with surgery. In Group B the figures were 83% for no surgery and 74% with surgery. These statistics should invalidate much of the formerly apparently logical attempts to increase cerebral blood flow by surgery on the occluded artery.

It is not stated how often an occluded artery could be successfully opened, but one would assume it was infrequent. In a recent review, Gillespie[12] revealed that 43 of 151 occluded arteries had reestablished blood flow. Of these, only ten patients had any apparent benefit. Mortality and morbidity of surgery were not reported.

The authors of the Joint Study found that the Group A patients could be divided into two separate categories. Approximately half of these patients were those who had transient attacks with full recovery. No statistical difference could be shown for this subgroup of Group A between the patients having surgery and those not having surgery. (At 42 months the cumulative survival rate for those having surgery was 81% compared to cumulative survival rate of 73% for those not having surgery.)

The remainder of the Group A patients were those who were described as having had "transient ischemic attacks with incomplete recovery." The patients had residual neurologic defifits, but these were considered to be mild, and the patients had shown improvement. Curiously, it was from this subgroup of patients that the favorable results for surgery on unilateral stenosis were derived. At 42 months the cumulative survival rate for this subgroup of patients having surgery was 82%, as compared to a cumulative

survival rate of 54% for patients having no surgery. This was statistically significant at the five percent level.

The meaning of this data is far from clear. It would appear that patients having transient ischemic attacks with complete recovery have similar results whether treated nonsurgically or with surgery. However, patients with ischemic attacks who are left with a neurologic deficit are apparently benefited by surgery. This would suggest that these subgroups of Group A patients are more dissimilar than is apparent at first examination. It raises a question of the etiology of the so-called ischemic attacks when no neurologic deficit results.

In the Joint Study, it was noted that operative mortality was 7.7% between 1961 to 1964, with only 1.3% from 1965 to 1968. This apparently resulted from improved surgical technique and better selection of surgical candidates (exclusion of patients with heart disease, etc.). However, since patients were selected for the study on the basis of their surgical candidacy before randomization, the nonsurgical group still represents a good control population. The Joint Study did not attempt to analyze patients for only 1965 to 1968.

DISCUSSION

An attempt has been made to reevaluate the evidence concerning surgical treatment of stroke. Conclusions derived from uncontrolled studies have been criticized. The recently published data from the Joint Study provides a well-controlled study with sufficient numbers of patients to derive some statistically significant conclusions.

This report showed that only one category of stroke can be treated by endarterectomy with reasonable assurance that the patient will be better off than if managed without surgery. This category consists of patients who have had a mild stroke with a mild, but definitive neurologic deficit, who have stenosis of only one carotid artery and who are good surgical candidates (patients without severe cardiovascular disease, hypertension, diabetes, or other serious illness).

Medical practitioners should be aware of the severe limitations of benefit that can be derived from endarterectomy as a treatment for stroke or a preventative of stroke.

Patients with the diagnosis of transient ischemic attack who had no persisting neurologic deficits, had essentially the same result, whether treated surgically or medically. As indicated above, the reason for this apparent discrepancy is not clear. The problem may lie in the hazard of making the diagnosis of transient ischemic attack when based mainly upon the symptoms of the patient. For example, transient monoparesis, hemiplegia, speech disturbance, visual disturbance, and sensory loss may result from other common problems such as hysteria, migraine, or seizure disorders. The problem in the interpretation of the meaning of vertigo, dizziness, light-headedness, syncope, or unsteadiness is well known to all practitioners and needs no further amplification. Certainly transient ischemic attack is only one of many causes of these symptoms. Therefore, it is possible that this group is impure. Those sixty-two patients may have, in part, included patients who did not, in fact, have transient ischemic attacks.

Accurate diagnosis of the patient's symptoms is essential, and as noted above, presents several problems. Symptomatic patients should be examined as soon as practical in an attempt to document the presence or absence of firm signs of neurologic deficit, as well as evidence of other disease, such as that of the cardiovascular system. Laboratory evaluation including electrocardiogram, electroencephalogram, x-ray, brain scan, and spinal fluid should be performed on all patients to confirm the diagnosis. Angiography must be carried out in any patient being considered for surgery. Arteriography is the only method for exact diagnosis of cerebrovascular disease and for reliable differential diagnosis of intracranial hemorrhage, vascular malformation, and neoplasm, but the test itself has significant morbidity rates and should not be performed indiscriminately. Patients who can be shown to have extensive intracranial atherosclerosis should be excluded from surgery.

Patients presenting only with a history of stroke symptoms and unsupported by neurologic deficit, will represent the greatest diagnostic problem. Considerable skill must be used in the interpretation of their symptoms, and in the decision for further investigation. As mentioned above, several conditions may simulate transient ischemic attack.

The interpretation of the severity of neurologic deficit will vary greatly. What one neurologist

will consider mild, another may consider severe. The concept of mild neurologic deficit is undefined. However, the term may be applied to a patient whose definite neurologic deficit clears within several days or a week (or possibly longer) and who is able to function again, as he did before the stroke. This may include individuals with hemiplegia and aphasia or lesser problems. When a patient is unable to return to his former level of function, there will be greater disagreement in regard to the mildness of the stroke and the problem must be decided upon the basis of the individual case and the experience of the physicians involved.

The interpretation of surgical candidacy will also present certain problems. A patient who is considered a good candidate by one surgeon may not pass the test of another. Diabetes, pulmonary disease, cardiovascular disease, or other disease must weigh heavily against surgical candidacy.

The interpretation of the severity of intracranial atherosclerosis is also vague and subject to the experience of the individual physician. This cannot be quantitated. However, what logic is there in removing one stenotic lesion if there are several more inaccessible ones? In addition, advanced age is also an important factor. Obviously, there is no definition for what is considered to be an advanced age, and this is open to wide variation in interpretation.

In any event, it is doubtful if extensive evaluation is indicated in a situation when the attending physician would not consider surgery, regardless of the diagnosis. In general, criteria for endarterectomy in strokes should be strict. The benefit of surgery is insufficient to warrant a liberal attitude toward factors determining the patient's candidacy for surgery. For example, it has been shown that amaurosis fugax is associated with a relatively benign course and is probably due to more than one etiology. Endarterectomy for this symptom cannot be routinely advised. Individual circumstances may present exceptions but criteria for surgery should be strict and limited to those who cannot adequately function with medical therapy.

In the future it can be anticipated that with improvement in surgical technique, patients with mild strokes and bilateral carotid disease may be benefited by bilateral surgery. However, this cannot be tacitly assumed without evidence. For example, it is possible that these patients have such widespread arterial disease that surgery on the accessible vessels may be but "a drop in the bucket." In addition, surgical mortality and morbidity may be significantly higher in this group.

On the contrary, it is doubtful if the advancing surgical technique of endarterectomy will prove beneficial to the patient with one or two occluded carotids. It is infrequent that an occluded artery can be opened for effective flow. This seems unlikely to change. It is more logical to protect the existing blood supply and collateral channels. Surgery on a stenotic artery contralateral to an occluded artery could be of possible benefit, but this cannot be assumed for the same reasons outlined above.

It would seem advisable in the foreseeable future for medical practitioners to limit the vascular surgery in the treatment of stroke to the category noted above and not alter this course of treatment until future, well-controlled studies report additional significant data. It is reasonable that such research should continue and that improvements can be anticipated, both in surgical techniques and in surgical morbidity and mortality. Possibly in the future surgical therapy will not be considered of self-evident benefit and the need for controlled studies will be fully recognized.

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ALCOHOLISM AND THE LAW



WILLIAM R. MALSH, B.S., M.A., J.D.

Nearly a third of all arrests in this country are for a crime a man or woman may commit simply by walking out of the house. It is an offense which has no apparent motive or intended victim. In fact, this crime — public drunkenness — seems to be beyond the control of most chronic alcoholics who nevertheless must answer for it.

Only in the last 200 years have doctors begun to realize that the chronically drunk are suffering from a disease which causes physical deterioration as well as destruction of the will to abstain.

Society as a whole, and the law in particular, have been slower than physicians to absolve

814 Lawyers Title Building, Alameda at Stone, Tucson, Arizona 85701.

the alcoholic of his guilt. The attitude that he is a moral weakling, defective in character, has persisted when other puritan condemnations have melted away.

It was less than 15 years ago, in fact, that even the American Medical Assn. officially took the position that the hospital, and not the jail cell, is the proper place for the rehabilitation of persons suffering from the disease of chronic alcoholism.

But this diagnosis has little effect on the police who must continue to drag the alcoholic away to the drunk tank. The law sees no difference between this man, now described as medically ill, and the public drunk whose overindulgence is voluntary.

In a country where the number of alcoholics is believed to be in excess of 4,000,000, this raises a serious question. How can we continue to punish the victims of an illness as though they were criminals? One is hard put to think of another disease for which the patient is held responsible.

An alcoholic or a chronic alcoholic is commonly considered a person who is powerless to stop drinking. The American Medical Assn. has said that an alcoholic depends on alcohol to such a degree that it disturbs, or interferes with, his bodily and mental health, interpersonal relations and satisfactory social and economic activity.

But whatever the definition, alcoholism can be and often is physically addicting. Frequently it is based on complex psychological disturbances. The same is true of many drugs which change behavior patterns. But whether we consider the well-to-do alcoholic or the penniless drunk, the problem he creates for himself is mainly medical and social.

But is the alcoholic the concern of the criminal law?

No, says society, when the drunk is in a status of intoxication in his home; yes, when he or she appears in public. But by definition the chronic drunk has lost his power to stop drinking. He now becomes a criminal by being in a place which he was unable to select merely because of his condition.

The drunk is on the horns of a dilemma: He must drink because he cannot help himself, and he cannot help himself because he must drink.

The U.S. Supreme Court has recently rendered an opinion on this theme. A majority of the justices arrived at a decision. Is it cruel and unusual punishment (forbidden by the U.S. Constitution) to inflict criminal penalties on the chronic alcoholic who is found by the police in a public place?

The chronic alcoholic who is picked up by the police for being drunk in a public place has violated the law and may be fined or put in jail. So held the U.S. Supreme Court in the summer of 1968 in the case of Leroy Powell vs. the State of Texas.

Powell was a $12-a-week bootblack who had been arrested more than a hundred times for being intoxicated in public. He was picked up again during the Christmas season in 1966, tried and convicted. At the trial, a physician, certified in the field of psychiatry, described Powell as a chronic alcoholic. His being drunk in a public place, testified the expert, was the result of a compulsion symptomatic of this disease.

The prosecutor simply quoted the law: "Whoever shall be found in a state of intoxication in any public place shall be fined $100." Powell was found drunk in a public place. Therefore, he is guilty of a crime.

True, said the defense lawyer, Powell was drunk in public. But he was there as the result of a disease he was unable to control. He could not even have the will to commit a crime. No man should be punished because he suffers from a condition he cannot overcome. This would be cruel and unusual punishment which is prohibited by the U.S. Constitution.

The defendant appealed to the U.S. Supreme Court. As is frequently the case when honest differences of opinion cannot be reconciled, all justices did not agee. The collective wisdom of the Court is not infallible. The Supreme Court is not final because it is infallible. It is only infallible because it must be final.

Should the conviction be upheld? Yes, said the majority. The opinion was written by Mr. Justice Thurgood Marshall. Chief Justice Warren, as well as Justices Black, Harlan and White, joined in confirming the sentence, although the latter differed from the others in his reasoning.

The majority held that the conviction did not constitute cruel and unusual punishment. After all, they said, there is no agreement even among medical men as to the meaning or treatment of "alcoholism" as a "disease." And furthermore,

would it not be "tragic to return large numbers of helpless, sometimes dangerous and frequently unsanitary inebriates to the streets of our city without even the opportunity to sober up adequately which a brief jail term provides?

The medical profession cannot, and does not, tell us with any assurance, the Court continued, that, even if the buildings, equipment and trained personnel were made available, it could provide anything more than slightly higher class jails for our indigent inebriates.

All we would do, the majority of the Court continued, would be to run the grave risk that nothing will be accomplished beyond the hanging of a new sign — reading "hospital" — over one wing of the jailhouse.

Furthermore, said Justice White in a separate opinion, the evidence in the trial court did not clearly establish first, that Powell was absolutely unable to keep from drinking to excess, and second, that he could not have prevented himself from appearing in public.

In any event, the majority asked, what reasonable alternatives to current practice are there? Presently existing facilities are totally inadequate to deal with this immense situation.

While putting an alcoholic in jail overnight is certainly not a cure, it does provide him with food and lodging until he is sober, as well as keeping him from injuring himself or others. Many civil institutions for alcoholics are little better than jails, said Justice Marshall, and usually confine their inmates longer than do most jails.

As is so often the case, the majority opinion of the Court represents a brilliant and logical analysis of a complex constitutional problem. Yet, it was unable to convince the other four justices who expressed the view that criminal punishment of a person merely for his "condition" or "status" which he is unable to change is not permitted by the U.S. Constitution.

This minority first pointed out what is not involved. The case of Powell vs. Texas does not raise any question as to the right of the police to stop and detain those who are intoxicated in public, whether as a result of disease or otherwise. Neither does it affect the State's power to commit chronic alcoholics for treatment. Nor does it concern the responsibility of an alcoholic for criminal acts.

What is involved is only the "condition" of being intoxicated in public.

In 1956, the American Medical Assn. for the first time took the position that alcoholism is a major medical problem and urged that alcoholics be admitted to general hospitals for care. This meant in effect that medical men had accepted a "disease concept of alcoholism."

But should a man or woman suffering from a noninfectious disease be put in jail?

Society seems to think so. In fact, of all arrests made by the police during a single year, about one-third were for public drunkenness. The drain which this procedure has on the entire criminal process is tremendous.

It has been said that there is probably no drearier example of the futility of using criminal punishment to solve a psychiatric problem than the enforcement of the laws against drunkenness.

If all this effort, all of this investment of time and money, were producing constructive results, then we might find satisfaction in the situation despite its costs.

But, the minority opinion said in quoting an expert, the fact is that "this activity accomplishes little that is fundamental. No one can seriously suggest that the threat of fines and jail sentences actually deters habitual drunkenness or alcoholic addiction. But the weary process continues to the detriment of the total performance of the law enforcement function."

The principle raised here is the foundation of individual liberty and the cornerstone of the relations between the civilized state and its citizens: criminal penalties may not be inflicted upon a person for a condition he is powerless to change.

Alcoholism is caused and maintained, the minority opinion states, by something other than the moral fault of the alcoholic. It is something that, to a greater or lesser extent, cannot be controlled by him, depending upon the physiological or psychological makeup of the individual. Today most qualified members of the medical profession recognize the validity of this concept.

The minority opinion was written by Justice Fortas. Justices Brennan, Stewart and Douglas agreed with it.

Neither the majority nor the minority opinion dealt with other offenses committed by a man who is drunk. Drunkenness is not a defense to any crime. Neither has the decision any relation to driving while intoxicated or to the commis-

sion of any other criminal act by a person who is under the influence of alcohol — be he an occasional drinker or a chronic alcoholic.

Powell, a chronic alcoholic, was found drunk in a public place. That alone was his offense. What is society's answer to his condition: crime or cure, jail or hospital?

A conservative estimate of chronic alcoholics or dipsomaniacs puts their number at over four million in the United States. The National Council on Alcoholism believes the more realistic figure to be 6½ million. An alcoholic affects, directly or indirectly, the lives of from five to ten other persons. It is obvious that alcoholism is one of the foremost medical, legal and social problems in the nation.

Some experts believe that alcoholism is not necessarily an independent disease but rather a manifestation of underlying psychological difficulties. In 42 states, alcohol addiction is a ground for divorce by the innocent spouse.

Of course, many men and women become drunk occasionally. They are not necessarily alcoholics. Others have a few "social" drinks as a matter of routine. Still others only take a sporadic libation here and there. As such these persons are not always dangerous to society. But put any one of them behind the wheel of a vehicle and the number of deaths as a result of driving while under the influence of alcohol are about the same for any one single year as the deaths the whole United States army suffered in Korea during three years.

The FBI reports that for every arrest per 100,000 population made for violations of narcotic drug laws, almost nine arrests took place for public drunkenness. Arrests for driving while under the influence of alcohol were three times as high as all the arrests for murder, non-negligent manslaughter, negligent manslaughter, forcible rape and robbery combined.

Is there an answer? The experiment with prohibition lasted from January 1920 to December 1933. It did not work. In fact it resulted in the greatest and longest disregard for law and order the nation has ever seen.

Is psychiatry the answer to problem drinkers? In a work published in 1967 it was said that in California alone, for instance, according to the best estimate available, providing all problem drinkers with weekly contact with a psychiatrist and once a month contact with a social worker would require the full-time work of every psychiatrist and every trained social worker in the United States.

What are some of the causes of alcoholism? It is quite possible that there are as many individual reasons as there are alcoholics.

At the same time, society has become more and more dependent upon technology. The individual often feels lost and powerless in a sea of numbers, computer cards and a bewildering bureaucracy. His social and economic condition rarely permits him to make independent major personal decisions. In his sense of helplessness he looks for a way of escape — even if only temporarily. And this negative reaction is not unknown to many of the young people of our time. Perhaps, in a sense, the use of alcohol is not merely a temporary withdrawal from impersonal realities but at the same time a conscious or unconscious fear of the overwhelming tensions and pressures exerted by society itself.

Some chronic drunks may interpret views such as these as a vindication for themselves. In order to remove personal blame they pretend to justify their condition by exaggerating society's ills. What may be a cause they transform into an excuse.

Alcohol, when used to excess can be the beginning of the end. Our original Americans who soberly stood at the shore to welcome their white friends can bear witness.

The time for a solution of the alcoholism dilemma is not yet. In fact, the Report by the President's Commission on Law Enforcement and Administration of Justice states that "the sheer size of the drunkenness problem in relation to the very limited knowledge about causes and treatment make it impossible to speak in terms of solution." Perhaps. But a relatively minor change in our national priorities on government spending might create a beginning.

ERRATA

The title of the article on page 382 of the May issue should read TAKAYASU'S ARTERITIS by Alberto Benchimol, M.D., Shuzo Matsuo, M.D., and Thomas Neese, M.D.



Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Many patients on special diets will find soups they can enjoy among the more than 50 different varieties available.



Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

A MATTER OF PERSONAL AND NATIONAL VALUES

"For where your treasure is, there will your heart be also" has become a truism since it was written in the New Testament (Matthew 6:21) two thousand years ago.

The matter of personal and national values is directly reflected in how the 577.5 billion dollars in personal consumption expenditures were spent in 1969, and these were 202.5 billion dollars more than were spent by the American public in 1963.

Health care accounts for 7.3% of the personal consumption expenditure as compared to 12.6% for recreation, alcohol, tobacco and personal grooming. The actual figures are:

#1 Recreation	36.3 billion dollars
#2 Alcohol	16.4 billion dollars
#3 Hospitals	14.6 billion dollars
#4 Physicians' services	11.5 billion dollars
#5 All other health care	10.3 billion dollars
#6 Tobacco	10.2 billion dollars
#7 Personal grooming	9.7 billion dollars
#8 Drugs	6.2 billion dollars

These data reported for the year 1969 by the Office of Economics of the U.S. Department of Commerce can be summarized as follows: We Americans spent 72.6 billion dollars for good times and good taste and 42.6 billion dollars for good health care in 1969.

Something has to give. Will it be the quality of medical care because of the squeeze of inflation and socialism, or will it be a reassessment of values? If the "consumer" is truly sincere in his efforts to improve the system of delivery of health care, he and she will do at least two things: 1) Maintain the best features of private and public American medical practice, teaching and research and 2) supplement the existing system with comprehensive medical insurance for those who need help through private and government health insurance and increase the financial support of medical teaching and research largely from highes taxes on less essential spending (recreation, alcohol and tobacco) as well as reassignment of existing internal revenues.

John R. Green, M.D.

AM *Editor's Page*

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President's Page

MEDICAL EDUCATION



On May 1st the Arizona Medical Association House of Delegates adopted Resolution 2-71 which made continuing medical education a requisite for maintaining membership in the Arizona Medical Association. The state medical societies of Oregon and Pennsylvania had earlier adopted similar standards. The American Academy of General Practice has had comparable requirements for membership for twenty-three years. Many other national specialty societies have recently instituted self evaluation programs based on continuing medical education. For economic, legal, professional, and moral reasons today's physician must keep abreast of new developments in his area of responsibility. Continuing medical education helps us in this endeavor.

The American Medical Association has created a Physician's Recognition Award which is presented to those of its members who qualify by participation in recognized continuing medical education programs. Arizona Medical Association members meeting our Association criteria also qualify for the Physician's Recognition Award.

The House of Delegates has acted wisely but only after due deliberation and study. Numerous proposals and alternatives were studied by the Ad-Hoc Committee. The final adopted recommendations are fair and reasonable. The requirements of the Arizona Medical Asociation program are really quite liberal. There are ten categories in which members may earn the required hours of study.

The University of Arizona School of Medicine has promised to produce adequate programs in those less populated areas of our state. At this time I can see no reason why any of our members would not be able to meet these requirements.

Our membership now has the challenge of making our continuing educational program effective. All such programs should meet the needs of the practicing physician. This will ultimately result in benefits to the physician and better health care service for our patients.

The Medical Educational Committee of your Association has done an excellent job in a difficult area. All of us need to support and aid them in their activities.

James L. Grobe, M.D.
President

Dean's Page

RHEUMATOLOGY FOR SECOND-YEAR MEDICAL STUDENTS

Arthritis, an illness of particular concern to physicians' training in Arizona, presents a problem to the medical college teacher because its chronic nature leads the patient to the office rather than to the hospital. In order to instruct students properly in this illness, a new program had to be devised, one which took the students to the patients.

The program faced four problems. First, it had to be tailored to the seven curricular hours and two afternoons allotted for rheumatic diseases. Second, there was no location at the College for examination of patients (until the University Hospital opens). Third, a large group of specialists would be required for close supervision of sixty-six students. Finally, there were the patients themselves. How would they react to an educational situation?

For faculty, we turned to the expert orthopedists and rheumatologists of the community, long dedicated to quality care for arthritic sufferers throughout the area. They did not hesitate. The first seventeen physicians approached agreed to donate their time, their private offices and access to their patients.

The Southwest Chapter of the Arthritis Foundation kindly provided the program with wheelchairs and special devices, arranged introductions to doctors and patients, furnished x-rays and donated transportation for patients.

The patients were introduced to the plan at a "Social Club" at the Arthritis Foundation. Would they donate their time to the students and undergo the discomfort of examination? Could the students visit them in their homes? Would there be an advantage to having students see them with their handicaps and how they overcame them in their everyday activities? The answer to every question was a resounding "yes." One patient suggested that the student bring his textbook and not pretend he was a doctor!

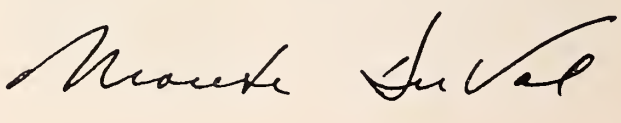
To prepare for their visits, the students viewed a film from the American Rheumatism Association on examination of the joints during their free time the week preceding the home visit. Each student received a small monograph on the rheumatic diseases and was advised to take this and an anatomy text with him to the patient's home. Two days later he met again with the patient in the office of the patient's own physician to report his findings, receive corrections and further demonstration and to observe how the physician conducted his practice.

During the time assigned for lecture, five of the community's rheumatologists reinforced the student's reading by demonstrating the wide variety of patients and by showing slides from their own collections. The informal format allowed the students considerable participation. Correlations with basic science were made by the private physicians themselves, which eloquently demonstrated that the basic science courses were not just "academic."

The results, as yet, can only be measured by the satisfaction of the participants. All of the instructors enjoyed the experience and approved of this approach. Several believed that the student was not yet ready to appreciate the clinical problems under consideration, but agreed that it was a valuable beginning. Many appreciated the efficiency of the program which allowed them to remain in their own offices. The students were deeply moved by the experience of being in the home of a severely handicapped person. They appreciated the unhurried quality of the encounter and the comfort of an experienced patient who was aware and tolerant of their deficiencies. They thoroughly enjoyed going to the private physician's office and the closeness to the "true" practice they foresee for themselves.

To the patients, the program was a spectacular success. They were gratified by the students' kindness, gentleness and interest, and were pleased that their contribution might help someone else. Several reported that they had feared exhaustion after the prolonged examination, but discovered that they felt "set up," more buoyant and enthusiastic the next day.

All instructors and all patients have volunteered to repeat their services next year.



Letters to Editor

Dr. John R. Green, M.D.
Editor, **Arizona Medicine**

The editorials of this year's five issues of **Arizona Medicine** have discussed vital issues currently involving the medical profession and especially the issue of a national health program to which the editor has directed the attention of Arizona physicians in two of his editorials. In February a graceful hearing was provided for the American Hospital Association's Ameriplan and in the May editorial which enthusiastically endorsed the Nixon Administration Health Program, the profession is exhorted to back the Nixon health program lest the floodgates to nationalization of the country be opened. The Nixon program, quoting the editor, "Would serve the public interest, maintain quality medicine, provide for the needy, and bolster the private enterprise system and free economy of the United States."

I am writing to question whether these very desirable goals will really be achieved if the Nixon health program is passed and to suggest that there may be one or more alternatives to the Administration's program and to nationalization of this country.

The central concept of the Administration's health program is the Health Maintenance Organization or H.M.O. I recently attended an Open Forum on Health Maintenance Organization at St. Luke's Hospital and Medical Center, sponsored by several health organizations including the Arizona Health Planning Authority, Arizona Regional Medical Program, and the Comprehensive Health Planning Council of Maricopa and Pima Counties. The meeting was conducted by representatives of Region 9, located in San Francisco, of the U.S. Department of Health, Education, and Welfare. These representatives made it quite clear that the Administration is pushing its H.M.O. concept very hard, and in the process Regional Medical Program spokesman as well as other H.E.W. officials are busily engaged in disseminating information about H.M.O.'s as part of a national strategy.

In their prepared statements the Federal representatives briefly described an H.M.O. as an organized system of health care which provides comprehensive health maintenance and treatment services for a voluntarily enrolled group of persons in a geographic area and is reimbursed through a prenegotiated and fixed period payment made by or on behalf of each person or family unit enrolled in the plan. If this sounds like a Kaiser Foundation Health Plan or a Health Insurance Plan of Greater New York, it is no mere coincidence, as the H.M.O. is modeled on existing successful closed panel organizations. The Administration is convinced that the health services delivery system in our country will be markedly improved if only additional financial and technical assistance is made available to establish a much greater number of similar type organizations.

The financial and technical problems involved in setting up an H.M.O. at the present time are

considerable. First there is limited grant-in-aid money presently available since the Administration program, of course, has not as yet been passed in Congress. But the Department of H.E.W. does have funds to provide technical assistance to H.M.O. planners. Technical personnel with special training in the planning, formation and operation of an H.M.O., as well as outside technical consultants are available to assist consumer or provider planning groups as soon as they have determined their interest. The response thus far is that five to seven hundred organizations are in various stages of planning with financing based on capitation. All sorts of organizations interested in establishing H.M.O.'s are contacting the various regional offices of H.E.W. for assistance including teaching hospitals, community hospitals, and medical schools. Very few medical societies have made inquiries.

The estimated cost in setting up an H.M.O. which would receive the government stamp of approval is $400,000 with a projected breakeven point three years after initiation of the project. This cost in dollars is one of the lesser problems involved. The H.E.W. officials provided a 21-page detailed check list describing the other developmental tasks. There are few health organizations which could meet the government requirements without intense planning and without the assistance of consulting firms and government agencies.

I submit that there are viable alternatives to the Administration health program. An alternative concept is the Foundation mechanism in which many medical societies are currently interested. The Foundation principle emphasizing, as it does, organization of medical services by the medical profession and incorporating such features as quality and cost control for medical services under physician management provides one alternative to the H.M.O. concept as currently described by H.E.W. officials. An alternative to the proposed administration program is the American Medical Association's Medicredit Bill which is designed to serve the public interest, provide a financing mechanism for the poor, assure quality control of health care and yet preserve the private enterprise system. I trust that the A.M.A.'s thinking on nation health legislation will receive appropriate exposure in **Arizona Medicine** and I am looking forward to an editorial discussion of the A.M.A.'s plan.

Sincerely,
Robert E. T. Stark, M.D.

EDITOR'S NOTE: Dr. Stark's comments are appreciated. We will have more to say about H.M.O.'s and the AMA's plan in subsequent editorials. Arizona physicians are encouraged to ventilate their opinions in Letters to the Editor.

Topics Of Current Medical Interest

IN VIEW OF THE ALARMING INCREASE IN REPORTED CASES OF INFECTIOUS SYPHILIS AND BECAUSE GONORRHEA IS NOW PANDEMIC IN THE UNITED STATES, THE COUNCIL ON ENVIRONMENTAL AND PUBLIC HEALTH, AMERICAN MEDICAL ASSOCIATION, HAS PREPARED THE FOLLOWING STATEMENT FOR THE INFORMATION AND GUIDANCE OF MEDICAL SOCIETIES:

STATEMENT ON VENEREAL DISEASE

The American Medical Association Council on Environmental and Public Health reports that gonorrhea ranks first and syphilis third among the reportable communicable diseases in the United States. For the year ending June 30, 1970, infectious syphilis rates were eight percent higher nationally than a year earlier, with annual increases spread over 33 states and an estimated incidence between 70-80,000 reported cases; there are 250,000 cases of all forms of syphilis estimated to be diagnosed and treated each year.

At the same time, gonorrhea morbidity exceeded 573,000 reported cases. Gonorrhea is pandemic in the United States, with an estimated two million cases.

The Council urges medical societies to acquaint their membership with the growing and alarming dimensions of the VD problem. Physicians should take all appropriate measures to reverse the rise in venereal disease and bring it under control.

Physicians in private practice treat approximately 80 percent of the syphilis and gonorrhea that comes to diagnosis but report to public health departments only one out of every eight cases of syphilis and one out of every nine cases of gonorrhea they treat. Physicians should assist public health departments by reporting the VD cases they treat. Medical societies are urged to cooperate and give broad support to public health authorities. Much effort must still be made by health departments and medical societies to foster mutual trust so that public and private medicine can work effectively for the control of both syphilis and gonorrhea.

The Council also urged medical societies to continue efforts for the enactment of state laws to permit physicians legally to treat VD cases of minors without obtaining parental consent. Currently, 36 states have laws and 6 states have attorneys general's opinion permitting treatment of minors for VD without permission of parents. Such sanction is not provided in the states of Alabama, Georgia, Mississippi, Minnesota, Missouri, Ohio, Wisconsin, and Wyoming.

There are also 11 states which do not have laws or regulations requiring all serological laboratories to report reactive specimens by name of patient and physician to the health department. They are Alaska, Arkansas, Colorado, Idaho, Indiana, Louisiana, Maine, Massachusetts, North Dakota, South Dakota, and Washington. Experience has shown that many serologic laboratories refuse to report names of reactors to the health department until it is required by law or regulation.

The American Medical Association is making VD a national theme for Community Health Week-1971, with suggested dates of October 17-23. Informational and promotional material will be available for medical societies. The AMA publication **PR Doctor,** January 1971, featured the problem of venereal disease, which included reports of excellent programs underway by state medical societies.

The Council encourages the publication of more articles in professional journals on venereal disease and its control for the guidance of the profession. Medical societies are asked to support education of patients and the public through more extensive and imaginative use of all available media and through school curricula.

NEW ARIZONA LEGISLATION FOR TREATMENT OF MINORS WITH V.D.

SUZANNE DANDOY, M.D., M.P.H.
Director, Preventive Health Services
Arizona State Department of Health

The incidence of venereal disease, particularly gonorrhea among young people, has reached epidemic proportions in the United States. The pattern in Arizona parallels that of the nation. In 1970 there were 4,427 cases of gonorrhea reported for a case rate of 251 cases per 100,000 population. The case rate for gonorrhea in the 15-19 year age group was 604 in Arizona; in Maricopa County the rate was 1,611. The case rates for syphilis are not as high as for gonorrhea, but Arizona ranked tenth in the nation in 1970 in respect to the rate for infectious syphilis. The counties with the highest reported incidence of infectious syphilis were Apache and Navajo, due to high rates among the Indians. The highest recorded gonorrhea case rates were in Apache, Coconino, and Yuma counties. It should be emphasized that these figures reflect only those cases reported to health departments. Many more cases of syphilis and gonorrhea are treated but not reported, and many infected persons do not seek treatment. The three minor venereal diseases, chancroid, lymphogranuloma venereum, and granuloma inquinale, are found infrequently in Arizona.

Teenagers suspecting they are infected with a venereal disease have traditionally hesitated seeking treatment because they knew and feared their parents would have to be contacted. Thus, they either attempted self-treatment or waited for symptoms to spontaneously subside, meanwhile possibly infecting others with the disease. New legislation in Arizona now enables minors to seek and receive treatment without first obtaining parental consent. On April 2, 1971, Governor Williams signed into law Senate Bill 155 which was passed by the Thirtieth Arizona Legislature. The bill reads as follows:

"Notwithstanding any other provision of the law, a minor who may have contracted a venereal disease may give consent to the furnishing of hospital or medical care related to the diagnosis or treatment of such disease and such consent shall not be subject to disaffirmance because of minority. The consent of the parent, parents or legal guardian of such a person shall not be

necessary in order to authorize hospital or medical care."

This law becomes effective August 13, 1971. After that date physicians in Arizona may diagnose and treat minors for venereal infection without parental consent. Similar laws are in effect in two-thirds of the other states in the nation. It is anticipated that this legislation will encourage more teen-agers to promptly seek and receive medical attention for a suspected venereal disease.

Such legislation is only one of many tools necessary to control the VD epidemic. A vaccine for syphilis is in the developmental stage but will not be ready for several years. A serologic test for detecting gonorrhea is being field-tested. Until these additional measures are available, we must expand the use of existing resources.

One of the major factors contributing to the rapid spread of gonorrhea is the undetected female reservoir. Although most males with gonorrheal urethritis will voluntarily seek treatment, the majority of infected females are asymptomatic. Undiagnosed and untreated, they continue to spread infection and are at risk of developing pelvic inflammatory disease. The only currently available means for detecting such asymptomatic females is by culturing for the organism. Females in the high risk age group, 15-29 years, should be routinely tested for gonorrhea by cervical culture whenever a pelvic examination is performed. Urethral cultures are no longer considered useful for diagnosis, but rectal cultures are recommended both for diagnosis and as a test of cure. Rectal gonorrhea may be present in fifty percent of females with confirmed genital gonorrhea.[1, 2] Smears are not adequate for the diagnosis of gonorrhea in females.

Diagnosed cases of venereal disease need adequate therapy. The recommended treatment schedule is:

Gonorrhea in males: 2.4 million units of aqueous procaine penicillin intramuscular, on initial visit.

Gonorrhea in females: 4.8 million units of aqueous procaine penicillin intramuscular in two injection sites, on initial visit.

Syphilis (primary, secondary, or early latent): 2.4 million units of benzathine penicillin G intramuscular in two injection sites, on initial visit.

In patients allergic to penicillin, tretracycline is an alternate drug of choice.

Prophylactic treatment of contacts to a venereal disease is another tool which should be used to control the spread of VD. Sexual contacts who are known to have been exposed to a diagnosed case of gonorrhea or syphilis during the infectious period of the disease are extremely likely to contract the disease. Even though initial serologic tests or cultures are negative, prophylactic treatment should be given to such contacts. The schedule for chemoprophylaxis is the same as for treatment of either disease.

Interviewing cases of syphilis in order to locate contacts who may be infected is still an important case-finding tool and one of the most effective methods for controlling the spread of syphilis. Epidemiologic services are performed by trained public health investigators and are available from the Arizona State, Coconino County, Maricopa County, and Pima County Health Departments. Physicians should report diagnosed cases of VD to the health department serving their area either by telephone or by written Confidential Case Report Card. An investigator will contact the physician to obtain permission to interview those patients having early syphilis or those patients for whom the physician has requested this service.

An educational campaign is underway to increase the awareness among teenagers and the general public of venereal disease signs and symptoms and the need for treatment. Thus, the tools currently available for controlling the venereal disease epidemic include:

1. Legislation permitting minors to receive diagnosis and treatment without parental consent.
2. Gonorrhea cultures to detect the asymptomatic reservoir of this disease.
3. Antibiotics which are effective against both diseases when given in adequate doses.
4. Epidemiologic investigation of cases of syphilis and gonorrhea to locate infected contacts.
5. Prophylactic treatment of sexual contacts to cases of infectious syphilis and gonorrhea.

When diligently applied, these measures can curtail the spread of the venereal diseases.

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MALPRACTICE

A REVIEW OF 174 CLAIMS

JOHN W. TEAHAN, M.D.

Assistant Medical Director, The Travelers Insurance Company, Hartford, Conn.

**reprinted from connecticut medicine
february 1971 issue, vol. 35, no. 2**

Whether the filing of a Malpractice claim is becoming increasingly fashionable is a moot question, but to physicians as well as to their insurance carrier it is reaching an alarming level. The number of claims seen at The Travelers has risen annually and for the first six months of 1969 a total of 174 claims were received in the Home Office. A review of these has been made in an effort to determine if any comon denominator exists in the evolution of this type of problem and what might be done to diminish the anxiety, expense and loss of time to all concerned.

The claims analyzed here came from 27 states and The Travelers was the carrier for the hospital in 102 instances, and for the physician in 72 others. In almost every claim both the hospital and doctor were alleged to have been negligent but we were not involved with both the physician and the hospital in any single case.

An explanation is indicated to describe how these claims are processed. The file contains the complaints as drawn up by the plaintiff's attorney, the complete hospital record, reports of the attending physicians, and in some cases evaluation of the case by a qualified consultant in the local area. Further aid in studying the particular case is also obtained by conferences with local qualified specialists and by referring the file for review in other cases to one of our consultant specialists in the area where the suit has been instituted, if this has not been previously done. Our purpose is to objectively review the submitted record, direct further investigative efforts, if needed and provide a medical analysis which assists in the decision to either settle or defend the case. It is our responsibility to point out to our examiners and their associated attorneys the potential areas on which an intelligent plaintiff's attorney might concentrate. In this way they are better able to prepare the case and to obtain the opinions of the local medical specialists necessary for their presentation.

The following charts indicate the opinions arrived at in view of apparent conclusive medical evidence. These claims have not all been tested in court and it does not follow that our analysis will necessarily be the final decision. However, especially in cases where potential exposure exists, it indicates the need for further medico-legal preparation and evaluation.

TABLE 1
Hospital Claims

Medical school affiliated	8(+)	10(−)	1?
Non-medical school affiliated	31(+)	44(−)	2?
Osteopathic	3(+)	3(−)	0
Total	42	57	3

TABLE 2
Physicians Claims

Board qualified	9(+)	8(−)	5?
Non-Board qualified	21(+)	18(−)	4?
Osteopathic	4(+)	0	0
Dentists	1(+)	2(−)	0
Total	35	28	9

(+) = Potential exposure (−) = Non-exposure

The above figures show little difference in the degree of probable involvement, regardless of the qualifications of the hospital or physician. The size of the hospital made little difference except in those with fewer than 100 beds, where the rate of apparent exposure was somewhat higher.

Among the cases reviewed, the following are of interest:

1. Five cases of sciatic nerve injury due to

alleged faulty intramuscular injection were seen, four of which occurred in children.

2. Six cases of cardiac arrest occurred. It is well known that this is an unpredictable and feared risk of surgery and anesthesia and the failure to promptly recognize and treat this condition, and not its occurrence, is usually the only legitimate basis for a claim.
3. There were three cases of quadriplegia following anterior disc surgery and, in two of these, significant displacement of the bone plug occurred. Also, two lumbar disc cases died from massive retroperitoneal hemorrhage. One of these cases was done by a General Surgeon and another by an Orthopedic Surgeon of mediocre training. This latter patient had a myclogram done in one hospital and was then transferred to a second hospital for the operation. We suspect that the doctor did not have privileges for disc surgery at the first hospital and, therefore, the second hospital who gave him privileges appears to be in trouble.
4. Fifteen cases were reviewed where claims were made concerning treatment given in hospital emergency rooms. This type of claim is increasing significantly and this is understandable when one considers the vast number of patients seen in emergency rooms.
5. One hospital in greater New York City had six claims among this series. Only one showed any negligence and this was relatively minor. It is interesting to speculate how such a group of unjustified claims could develop in a single institution.

Many of the above incidents should never have occurred. Footdrop in a growing child is a significant disability which is basically inexcusable. Detection of cardiac arrest is the result of constant and acute observation, particularly on the part of the anesthetist. In our series, the presence of a well-trained anesthetist and an equally capable surgeon diminished almost completely the possibility of this type of claim being justified.

The emergency room problem will probably be helped by the increased staffing of these services by full-time physicians if they are carefully selected. The availability of an interpreter is also desirable. We have had claims instituted, mostly unjustified, but nevertheless distressing to those involved, where the doctor, invariably from a foreign medical school, had trouble making himself clear to the patient, or where a patient, whose knowledge of English was either absent or limited, failed to comprehend and follow the doctor's instructions.

Some mention must be made about doctor-patient relations. A breakdown in this appears more often than any other single factor. Many patients develop, often unknowingly, an emotional dependency and the doctor's success or failure in recognizing and meeting this need is often the factor which determines the development of a claim. Also, the publicity given transplant surgery, the restoration of traumatically severed limbs as well as "medical dramas" emerging from television screens have produced some contradiction of values among people in general. They appear to accept the failures and complications of these publicized and unusual procedures but expect, on the other hand, that every gall bladder operation and every fracture case, no matter its severity, should recover uneventfully. The increased demand for health services as well as the shortage in available skilled personnel has likewise added to the problem. Realization of this doctor-patient relationship along with complete office and hospital records, properly authorized operative and treatment permissions, are a few of the basic steps that can decrease the number of claims as well as make the defense of the many unjustified claims that much easier.

Finally, a dichotomy exists between the medical and legal professions in this field. The present system frequently results in awards in malpractice cases that are not proportionate to the proven damages. The submission of malpractice claims to arbitration by a board of experts has been suggested in the past and certainly appears to warrant serious consideration. Medical societies in many states have tried various plans in an attempt to control this problem and to at least decide which cases are unjustified and which have merit. It is my personal feeling that the system which has the best chance for success and which will be most widely utilized is one where objective minded members of the medical and legal profession work on a common committee.

Acknowledgment

My appreciation to Dr. Albert Larson, Vice-President and Chief Medical Director of The Travelers Insurance Company for his counsel in the preparation of this report.

ArMPAC — ARIZONA MEDICAL POLITICAL ACTION COMMITTEE

AMPAC — AMERICAN MEDICAL POLITICAL ACTION COMMITTEE



DON V. LANGSTON, M.D.

As the second decade of the American Medical Political Action Committee begins it is fitting to review its past accomplishments but more important to attempt an extrapolation of future activities. What are AMPAC and ARMPAC and why should Arizona physicians concern themselves and become members of these organizations?

In 1961 a few physicians realized that the battle against Medicare (and I won't go into the merits or disadvantage of that program) had been lost. Also there had arisen a new breed of bureaucrat, i.e. the health plan programmer, a non-MD who was influencing health legislation both locally and nationally. One of the reasons for this was that physicians had no political action organization. They were well equipped to lobby but not to elect. Thus AMPAC was organized with the objectives of election of qualified candidates and the political education of doctors.

The first objective is achieved by both direct contributions to candidates and by formation of candidate support committees. Membership dollars are used exclusively for candidate support. Political education dollars are provided in Arizona by proceeds from our annual banquet and a grant from the Arizona Medical Association.

Selection of candidates on a national basis is made by the AMPAC board of directors whose members are appointed by the AMA board of trustees, and candidates on the state basis are selected by ARMPAC board of directors who are appointed by the Arizona Medical Association board of directors. No candidate will receive monies from AMPAC without a request from the local state Pac. Thus the wishes of the

majority of the local physicians are of paramount importance in the selection of candidates.

Over the past ten years numerous candidates to the United States Senate, United States House of Representatives, and state legislatures have received AMPAC support with an approximate 80% success ratio (89% in Arizona in 1970). These candidates have been both Democrat and Republican, from all 50 states, and with a wide variation in personalities and general platforms. Thus our legislative lobbyists can now anticipate being able to present the views of organized medicine to elected officials when in the past they were often times refused a hearing.

AMPAC now is an effective political force on the national scene. It is second only to the AMA in number of members. Physicians in Arizona can become a part by paying an annual membership fee of $20.00 or a sustaining membership fee of $100.00.

The outlook for the next ten years is favorable. Medical care is now the banner of the campaigning, politician and all shades and ideas on how it should be provided are being presented to the American public. We can not divorce ourselves from the forces moving medicine (forward or backward dependent upon your point of view) nor can we be only obstructionists. For the wagontrain of medical progress is rolling and if we stand in its trail to stop it we shall only be rolled over. We must take up the reins and direct the trail to be followed, not be seated on the tailgate to be taken anywhere the health planners dictate. On a state basis there is much to be accomplished. A fourth congressman will be elected in 1972 as well as the three existing congressional seats, and also the entire state legislature.

Now is the time to consider your membership in AMPAC, for this organization is only as strong as the physicians of Arizona wish it to be. If you are not now a member, please join. If you are a member, consider sustaining memberships of $100.00. This is less than $2.00 a week, most labor union members contribute $1.00 a week to their political action coffers where much of the push of the Kennedy Bill is located. National Health Plans are almost a certainty. What final form such a plan will take is still uncertain. If you stand by now and do not help in the decision making, how can you argue with the final results.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc., held Tuesday, April 27, 1971, in the Lanai Room of the Safari Hotel at 4611 North Scottsdale Road, Scottsdale, Arizona convened at 7:28 a.m., Fred H. Landeen, M.D., President and Chairman, presiding.

MINUTES

Minutes of the meeting held on March 27, 1971, were approved as distributed.

CHIROPRACTIC

The letter of Norman N. Komar, M.D., regarding the legality and ability of Chiropractors to use x-rays, and to properly diagnose from these x-rays was discussed at some length.

IT WAS MOVED AND CARRIED THAT WE SHOULD REQUEST THE BOARD OF MEDICAL EXAMINERS TO ASK FOR AN ATTORNEY GENERAL'S OPINION AS TO WHETHER THE USE OF X-RAYS BY CHIROPRACTORS WAS WITHIN THE LAW.

KFCA-FM PROPOSED MEDICAL SERIES

The request from Fran Stott, Program Development, of KFCA-FM for financial support on a thirteen week radio series on medical practices was reviewed. It was noted that the request for $2000.00 was not provided for in our budget, and that this radio station serves only the Phoenix area, and should more properly have been referred to the Maricopa County Medical Society.

IT WAS MOVED AND CARRIED THAT WE NOT PARTICIPATE FINANCIALLY IN THIS PROPOSED MEDICAL SERIES.

BOARD OF DIRECTORS AGENDA 4/27/71

The Executive Committee reviewed the agenda for the Board of Directors meeting scheduled for 9 a.m. on April 27, 1971 and prepared various recommendations on the items listed.

OTHER BUSINESS

"Clinic" Listings in Telephone Book — The matter of the Mountain Bell creation of a new section in the

Yellow Pages under the heading of "Clinics" which included all clinics, such as chiropractors, naturopaths, osteopaths and MDs, was discussed. Mr. W. A. Eckhardt, Directory Sales Manager, of Mountain Bell letter of April 22, 1971, reads as follows:

"Thank you for your letter of April 20, 1971, regarding the Clinics heading the forthcoming Tucson Telephone Directory.

"While I can certainly understand your concern, we have found that when the directory-using public refers to the heading of Clinics they expect to find all types of Clinics listed. For this reason, we are instituting the change and for the time being, at least, we plan to keep the heading of Clinics non-restricted. By non-restricted we mean all types of Clinics may be listed, both medical and non-medical.

"To assure proper inclusion of the medical profession, we have added, as you know, the classified headings of 'Medical Groups' and 'Physicians and Surgeons-MD-Group, Associate and Corporate Practice.' "

Following further discussion of this it was determined that we advise our membership, that they be careful not to be listed in this "Clinic" section. It was also determined that we should express our concern about this matter to Mr. Lou Jolley, Vice President, for Arizona of Mountain Bell.

The meeting adjourned at 8:41 a.m.

Edward Sattenspiel, M.D.
Secretary

BOARD OF DIRECTORS

Meeting of the Board of Directors of the Arizona Medical Association, Inc., held in the Convention Center of the Safari Hotel, 4611 North Scottsdale Road, Scottsdale, Arizona, April 27, 1971, a quorum being present, convened at 9:09 a.m., Fred H. Landeen, M.D., President and Chairman presiding.

WELCOME

Dr. Landeen introduced the various guests and Paul B. Jarrett, M.D., gave the invocation.

MINUTES

The minutes of the meeting held on March 28, 1971 were approved as distributed.

ArMPAC BOARD OF DIRECTORS

Don V. Langston, M.D., Chairman of the Board of Directors of ArMPAC, reported on the current status of the activities of ArMPAC group, and urged all members of the Board of Directors to be present at the ArMPAC Banquet scheduled for Thursday, April 29. He indicated that the Honorable Sam Steiger, Congressman of Arizona's third district and Wayne W. Bradley, Assistant Director, Department of Congressional Relations of the American Medical Association would be speaking on the subject "National Health Legislation — The Outlook for the Future."

BOARD OF DIRECTORS

Board of Medical Examiners Appointments

Dr. Landeen pointed out that Juan C. Fonseca, M.D., term on the Board of Medical Examiners is expiring on June 30, 1971 and that the Pima County Medical Society has submitted a list of nominees for that position.

IT WAS MOVED AND CARRIED THAT THE FOLLOWING NAMES BE SUBMITTED TO THE GOVERNOR FOR POSSIBLE APPOINTMENT TO FILL THE POSITION LEFT BY DR. FONSECA'S EXPIRATION OF TERM:

HUBERT R. ESTES, M.D.
ARTHUR V. DUDLEY, JR., M.D.
RICHARD L. DEXTER, M.D.

Board of Health — Interim Appointment

Dr. Landeen indicated that Albert J. Oschner, II, M.D. had resigned from the Board of Health, and that due to an emergency situation the Executive Committee determined to submit the names of William W. McKinley, Jr., M.D. of Bisbee; C. Herbert Fredell, M.D. of Flagstaff; and Otto I. Bendheim, M.D. of Phoenix as nominees for appointment for the unexpired term which ends February 2, 1973.

IT WAS MOVED AND CARRIED TO CONFIRM THE ACTION OF THE EXECUTIVE COMMITTEE IN THIS MATTER.

Board of Directors Meeting Schedule for 1971-72

The proposed meeting schedule for the Board of Directors and Executive Committee was presented for consideration.

IT WAS MOVED AND CARRIED THAT UNLESS MAJOR OBJECTIONS WERE RAISED, THE FOLLOWING SCHEDULE WOULD BE THE SCHEDULE OF BOARD OF DIRECTORS MEETINGS AND THE EXECUTIVE COMMITTEE MEETINGS FOR THE FOLLOWING FISCAL YEAR.

Board of Directors	Executive Committee
5/ 1/71	-----
7/25/71	7/24/71
9/26/71	9/25/71
11/21/71	11/20/71
2/27/72	2/26/72
4/25/72 (Annual Meeting)	4/25/72

THE PRESIDENT WAS GIVEN THE AUTHORITY TO CHANGE THESE DATES SHOULD OBJECTIONS BE RAISED SUBSEQUENT TO THIS MEETING.

BOMEX Lease Renewal

The matter of leasing space for the period of 7/1/71 through 6/30/72 with a one-year option (7/1/72 through 6/30/73) at the rate of $5,203.00 per year was presented.

IT WAS MOVED AND CARRIED THAT THIS LEASE BE APPROVED AS PRESENTED.

Valley National Bank — General Borrowing Resolutions

IT WAS MOVED AND CARRIED THAT THE BOARD APPROVE A LINE OF CREDIT ESTABLISHED WITH THE VALLEY NATIONAL BANK FOR THE BLANCE OF THE 1971 YEAR IN THE AMOUNT NOT TO EXCEED $97,000.

EXECUTIVE COMMITTEE

Financial Statement Period ending 3/31/71

Dr. Dew reviewed the financial statement for the period ending 3/31/71, and requested a budget adjustment in the account "519 — Interest Expense Building Loan."

IT WAS MOVED AND CARRIED THAT AN ADJUSTMENT IN THE AMOUNT OF $1,315.34 BE APPROVED.

GOVERNMENTAL SERVICES COMMITTEE

Nursing Home Visits — Part B Intermediary Letter Number 70-32 Dated November 1970

Dr. Landeen pointed out that at the March 28 Board of Directors meeting it was directed that a resolution be prepared for consideration of the Board of Directors for possible introduction to the House of Delegates regarding this matter.

RESOLUTION No. 8-71
Introduced By: BOARD OF DIRECTORS

Subject: PART B, INTERMEDIARY LETTER NO. 70-32 DATED NOVEMBER, 1970.

WHEREAS, Part B Intermediary Letter No. 70-32 dated November, 1970 resulted in Aetna Life and Casualty's (Part B Intermediary for Arizona) distribution of Release No. 39 dated January 29, 1971 which reads as follows:

"NURSING HOME VISITS

New regulations require carriers to assume that a visit by a physician to a nursing home involves services to several patients. In applying this concept, a lower charge will generally be allowed unless the billing form clearly indicates that only one patient was seen.

Whenever services are rendered to only one patient in a nursing home, it is recommended that the phrase 'only patient seen' be used on the billing form, or in item 7C of Medicare Claim Form 1490. This will assure an equitable reasonable charge determination. Failure to supply this information will result in a lower claim payment."; and

WHEREAS, This regulation appears to be aimed at controlling a small number of physicians; and

WHEREAS, Its broad application creates hardships on all physicians caring for patients in nursing homes; therefore be it

RESOLVED, That this Association urge Thomas M. Tierney, Director, Bureau of Health Insurance (author of this regulation) to rescind Part B Intermediary Letter No. 70-32; and be it further

RESOLVED, That the Bureau of Health Insurance utilize existing peer review mechanisms for controlling those few physicians who are suspected of over-utilizing the medicare program; and be it further

RESOLVED, That this resolution be brought to the attention of the American Medical Association with the request that that organization assist us in rescinding Part B Intermediary Letter No. 70-32.

IT WAS MOVED AND CARRIED THAT THE RESOLUTION, PART B. INTERMEDIARY LETTER NO. 70-32 DATED NOVEMBER, 1970, BE INTRODUCED TO THE HOUSE OF DELEGATES BY THE BOARD OF DIRECTORS.

Social Security Amendments Relating to Peer Review

Dr. Landeen again reminded the Board that they had requested that a resolution be prepared for possible introduction to the House of Delegates dealing with the matter of the Association's activities with regard to possible Social Security Amendments, that will be forthcoming regarding peer review. The resolution reads as follows:

RESOLUTION No. 9-71
Introduced By: Board of Directors
Subject: SOCIAL SECURITY AMENDMENTS RELATING TO PEER REVIEW

WHEREAS, It appears that Congress will very likely enact, as part of the Social Security Administration Amendments of 1971, legislation dealing with peer review; and

WHEREAS, Such legislation will likely follow along the lines of Senator Bennett's Professional Standards Review Organizations Amendment 851 to H.R. 17550 introduced in 1970; and

WHEREAS, If such legislation becomes law, it is vital that the medical profession provide leadership and direction; therefore be it

RESOLVED, That the Arizona Medical Association, through its Board of Directors and staff, create an umbrella organization for the purpose of handling any peer review program that may be dictated by the Social Security Administration Amendments; and be it further

RESOLVED, That such organization utilize, as best as possible, existing peer review structures within the state; and be it further

RESOLVED, That such organization be made cognizant of the Association's position on utilization review as outlined in the position paper on the subject adopted by the Board of Directors at their January 31, 1971 meeting.

IT WAS MOVED AND CARRIED THAT THE RESOLUTION AS PRESENTED ABOVE SHOULD BE INTRODUCED BY THE BOARD OF DIRECTORS IN THE HOUSE OF DELEGATES.

LEGISLATIVE COMMITTEE

Richard O. Flynn, M.D., Chairman of the Legislative Committee gave an up-to-date status report on the numerous bills before the Arizona Legislature. It was noted that copies of this report would be available from the Headquarters office upon request.

COMMUNICATIONS

Woman's Auxiliary

Dr. Landeen reviewed the letter dated 4/17/71 from Mrs. Charles E. Henderson, President-Elect of the Woman's Auxiliary concerning their activities — REPORT RECEIVED.

OTHER BUSINESS

Travelers Program Status Report

Mr. Leon Zaccaro, Assistant Secretary, Travelers Insurance Companies presented the following report:

"I am very pleased to be here as a representative of the Travelers Insurance Companies. We together with the Patzman, Allen, Lamb & Associates Agency of Tucson and the Burns, Harrelson, Burns Agency of Phoenix have worked with your state and county associations to develop for you a program of professional liability insurance. We started our discussions some time ago with the premise that what was needed by the association was a program to fill the needs of the majority of its members for a stable continuing market for professional liability insurance.

The final program that was accepted and endorsed

by the Board of Directors on January 31st, was published in its entirety in the March issue of Arizona Medicine. The presentation was made by the Travelers in conjunction with Patzman, Allen, Lamb Agency and the Burns, Harrelson, Burns Agency. All of these people worked very hard and invested large amounts of time and money to create a program that would make available to ArMA members a substantial limit of liability and at a reasonable premium, and a very stable market of professional liability insurance.

This program is underwritten by the Travelers Insurance Companies and marketed by Patzman, Allen, Lamb, and Burns, Harrelson, Burns. We are well qualified in both experience and assets to underwrite this program. The Travelers was established 107 years ago this month. Today our assets exceed 7 billion dollars.

Our 1970 insurance premium writings were 2.8 billion dollars with total income for 1970 3.2 billion dollars. In Arizona, before 1970, our direct written premiums were just under 13 million dollars.

Our Phoenix office servicing the State of Arizona is equipped to provide all of the services offered by the Travelers. We have two claims offices in Arizona, one in Phoenix and one in Tucson. The agencies that are marketing this program, Patzman, Allen, Lamb; Burns, Harrelson, Burns, are the two oldest, largest agencies in Arizona. They are well qualified to handle and market the professional liability insurance as well as all the other services that Travelers has available. Full information on the Travelers; Patzman, Allen, Lamb; and Burns, Harrelson, Burns is available in Room 301 and 302. All questions in connection with your professional liability program will be answered for you throughout this week in these rooms.

Shortly after acceptance by the Board of Directors, the marketing began. Today I am most happy to report to you the following participations: Of the approximately 1500 eligible members of the Association, we have signed applications indicating interest by the doctors on approximately 700. Of these 700, 300 have already placed their insurance in the Travelers and many of the others have indicated their willingness to do so upon expiration of their current policy. There are basically five classifications of doctors running from the general practitioner to the surgeon, and our participation by classification is 80, 60, 70, 60 and 30 from one through five respectively.

I would like to mention some of the highlights of the program that have been added since the Association's release of February 3rd. First, because of the overwhelming response to the program by you gentlemen, the Travelers has agreed to guarantee this program to the Association for a minimum period of five years rather than to wait until the required percentage of participation was met. Second, the partnership for corporation charge of 20% has been modified so as not to exceed a maximum of two doctors premiums. And, we have restated our agreement to consider modifying or removing this charge when the program becomes self-rating. Third, we have held the rate, or premium level indicated to your Board on January 31st, notwithstanding an increase of 10% by the Bureau effective March 24, 1971. Please keep in mind that one of the most important features of this program is its ability to become self-rated. We have agreed to permit self-rating when sufficient experience in time indicates credibility from an actuarial position. In the meantime we are affording a very strong stable market for professional liability insurance to the majority of the members of the Arizona Medical Association, and are making available at their option all of the lines of insurance and all of the services offered by the Travelers Insurance Companies.

Rooms 301 and 302 have been set aside for discussion or interviews with each and every doctor that has any questions. We invite all of you to drop in and visit with us in these rooms during this week.

In regard to self-rating, the cost of professional liability insurance as with the cost of other lines of insurance, is dependent upon the frequency and severity of loses. In life insurance the longer people live the less life insurance costs. The fewer fires, the less fire insurance costs. The fewer automobile accidents, the less automobile insurance costs. Likewise, the fewer circumstances surrounding which a patient can allege malpractice, the more reasonable the costs for professional liability insurance.

Again, I would like to repeat that from now on to the end of the convention on Saturday, Rooms 301 and 302 will be staffed by representatives of the Travelers; Patzman, Allen and Lamb; and Burns, Harrelson and Burns to assist you in any way possible.

This morning at the request of the Arizona Medical Association's Board of Directors we have agreed to permit members the option of using the Travelers regular firm of attorneys of O'Connor, Cavanagh, Westover, Killingsworth & Beshears."

Much discussion ensued following this report about the possibility of obtaining the services of the law firm of O'Connor, Cavanagh, Westover, Killingsworth & Beshears, and the advantages of using this firm to the physicians in Arizona.

IT WAS MOVED AND CARRIED THAT THE BOARD OF DIRECTORS REQUEST THAT TRAVELERS INSURANCE COMPANIES RECONSIDER ITS POSITION AND ALLOW A CHOICE BETWEEN THE TRAVELERS EXISTING FIRM AND THE FIRM OF O'CONNOR, CAVANAGH, WESTOVER, KILLINGSWORTH AND BESHEARS.

IT WAS MOVED AND CARRIED THAT THE ABOVE MOTION BE PLACED ON THE AGENDA FOR THE BOARD OF DIRECTORS MEETING ON SATURDAY, MAY FIRST.

Meeting adjourned 10:36 a.m.

Edward Sattenspiel, M.D.
Secretary

BOARD OF DIRECTORS

Meeting of the Board of Directors of the Arizona Medical Association, Inc., held at the Kudu Room of the Safari Hotel, 4611 N. Scottsdale Road, Scottsdale, Arizona, May 1, 1971, convened at 12:08 p.m., James L. Grobe, M.D., President and Chairman, presiding.

WELCOME

A quorum being present, the meeting was called to order by Dr. Grobe; invocation by Dr. Jarrett.

COMMITTEE APPOINTMENTS

The Board of Directors confirmed the following presi-

dential appointments.

ARTICLES OF INCORPORATION & BYLAWS COMMITTEE

Charles E. Henderson, M.D., Chairman	1971-72
Arnold H. Dysterheft, M.D.	1971-72
Paul B. Jarrett, M.D.	1971-72
William B. Steen, M.D.	1971-72
Clarence E. Yount, Jr., M.D.	1971-72

BENEVOLENT AND LOAN FUND COMMITTEE

Daniel T. Cloud, M.D., Chairman	1971-72/1969-72
William N. Chloupek, M.D.	1971-74
Merlin K. DuVal, M.D.	1970-73
R. Lee Foster, M.D.	1971-74
William C. Scott, M.D., Treasurer, Specified	1971-72
Cecil C. Vaughan, Jr., M.D.	1970-73

GOVERNMENTAL SERVICES COMMITTEE

Walter R. Eicher, M.D., Chairman	1971-72/1969-72
Stanford F. Farnsworth, M.D.	1969-72
Harold N. Gordon, M.D.	1971-74
John P. Heileman, M.D.	1969-72
Artell Johnson, M.D.	1971-74
Louis C. Kossuth, M.D.	1971-74
Alan I. Levenson, M.D.	1970-73
John G. Lingenfelter, M.D.	1969-72
Dermont W. Melick, M.D.	1970-73
Patrick P. Moraca, M.D.	1971-74
Dwight H. Porter, Jr., M.D.	1970-73
Wallace A. Reed, M.D.	1970-73
Marvin C. Schneider, M.D.	1971-74
Samuel A. Smith, M.D.	1970-73
Glen H. Walker, M.D.	1971-74

GRIEVANCE COMMITTEE

Fred H. Landeen, M.D., Chairman SPECIFIED	1971-72
Walter Brazie, M.D.	1969-72
Richard E. H. Duisberg, M.D.	1969-72
Norman D. Duley, M.D.	1971-74
Keith H. Harris, M.D.	1969-72
Carolyn Gerster, M.D.	1970-73
George W. King, M.D.	1971-74
William W. McKinley, Jr., M.D.	1970-73
Rolland F. Schoen, M.D.	1970-73

HISTORY & OBITUARIES COMMITTEE

John R. Green, M.D., Chairman SPECIFIED	1971-72
Walter Brazie, M.D.	1969-72
John W. Kennedy, M.D.	1971-74
Harold W. Kohl, Sr., M.D.	1970-73
Abe I. Podolsky, M.D.	1969-72
Roland F. Schoen, M.D.	1969-72
Jay L. Sitterley, M.D.	1970-73
MacDonald Wood, M.D.	1970-73

LEGISLATIVE COMMITTEE

Richard O. Flynn, M.D., Chairman	1971-72/1970-73
Chester G. Bennett, M.D.	1969-72
Richard H. Bruner, M.D.	1971-74
Carlos C. Craig, M.D.	1969-72
William E. Davis, M.D.	1969-72
Kenneth A. Dregseth, M.D.	1971-74
Donald F. Griess, M.D.	1969-72
Louis Hirsch, M.D.	1970-73
John P. Holbrook, M.D.	1971-74
John F. Kahle, M.D.	1971-74
John K. Kerr, M.D.	1969-72
Don V. Langston, M.D.	1970-73
Meyer Markovitz, M.D.	1969-72
William B. McGahey, M.D.	1969-72
Robert J. Oliver, M.D.	1970-73
O. Melvin Phillips, M.D.	1971-74
Wilfred M. Potter, M.D.	1971-74
James L. Schamadan, M.D.	1970-73
Raymond Vaaler, M.D.	1971-74
Dennis Weiland, M.D.	1971-74
W. Curtis Wilcox, M.D.	1970-73
Lowell C. Wormley, M.D.	1969-72

MEDICAL ECONOMICS COMMITTEE

John H. Ricker, M.D., Chairman	1971-72/1971-74
Richard S. Armstrong, M.D.	1969-72
Charles M. Bergschneider, M.D.	1970-73
Harvey G. Brown, M.D.	1969-72
B. Robert Burkhardt, M.D.	1970-73
Ian M. Chesser, M.D.	1971-74
Charles F. Dalton, M.D.	1970-73
Howard N. Kandell, M.D.	1971-74
Gerold Kaplan, M.D.	1970-73
Roger E. Wilcox, M.D.	1971-74

PROCUREMENT AND ASSIGNMENT COMMITTEE

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Harry C. Smith, M.D. SOUTHEASTERN	1971-72
George H. Mertz, M.D. CENTRAL	1971-72
Jack I. Mowrey, M.D. NORTHERN	1971-72
James T. O'Neil, M.D. SOUTHWESTERN	1971-72
John R. Schwartzmann, M.D. SOUTHERN	1971-72

PROFESSIONAL COMMITTEE

Albert G. Wagner, M.D., Chairman	1971-72/1970-73
Robert J. Antos, M.D.	1970-73
Robert I. Cutts, M.D.	1969-72
Robert C. Evans, M.D.	1969-72
Robert S. Ganelin, M.D.	1970-73
Rudolf Kirschner, M.D.	1971-74
Harold W. Kohl, Jr., M.D.	1971-74
Laurence M. Linkner, M.D.	1970-73
William G. Payne, M.D.	1970-73
Hermann S. Rhu, Jr., M.D.	1971-74
Donald F. Schaller, M.D.	1970-73
Richard J. Toll, M.D.	1969-72
Wayne F. Winn, M.D.	1971-74

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Robert Brazie, M.D.	1971-74
Donald E. Clark, M.D.	1970-73
Don V. Langston, M.D.	1971-74
Richard T. McDonald, M.D.	1969-72
William W. McKinley, Jr., M.D.	1970-73
William C. Scott, M.D.	1971-74
Morton S. Thomas, III, M.D.	1971-74
Jack H. Wilson, M.D.	1970-73

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John R. Green, M.D., Chairman	1971-72/1969-72

Andre J. Bruwer, M.D.	1971-74
Walter V. Edwards, Jr., M.D.	1971-74
Gerold Kaplan, M.D.	1971-74
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William B. McGrath, M.D.	1969-72
William F. Sheeley, M.D.	1970-73
David C. H. Sun, M.D.	1970-72

SCIENTIFIC ASSEMBLY COMMITTEE

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William E. Bishop, M.D.	1971-74
W. Scott Chisholm, Jr., M.D.	1969-72
Philip E. Dew, M.D., Vice-President, Specified	1971-72
Milton S. Dworin, M.D.	1968-71
Douglas W. Frerichs, M.D.	1969-72
Vincent A. Fulginiti, M.D.	1970-73
T. Richard Gregory, M.D.	1969-72
James Hurley, M.D.	1971-74
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William F. Sheeley, M.D.	1971-74
David D. Smith, M.D.	1971-73
Ashton B. Taylor, M.D.	1971-72
Albert G. Wagner, M.D.	1971-72

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Monroe Green, M.D.	1971-73
Seymour I. Shapiro, M.D.	1971-74
John J. Standifer, M.D.	1971-73
Max L. Wertz, M.D.	1971-74

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Manus R. Spanier, M.D., Chairman	1971-72
Neil Alden, M.D.	1971-72
Clifton J. Alexander, M.D.	1971-72
Walter R. Eicher, M.D.	1971-72
William R. Engvall, M.D.	1971-72
Paddy R. Garver, M.D.	1971-72
Francis M. Findlay, M.D.	1971-72
Meldrum J. Harvey, M.D.	1971-72
Thomas W. Jensen, M.D.	1971-72
Louis C. Kossuth, M.D.	1971-72
Richard McDonald, M.D.	1971-72
Dermont W. Melick, M.D.	1971-72
Joseph Saba, M.D.	1971-72
Hugh C. Thompson, Jr., M.D.	1971-72
Joseph Whaley, M.D.	1971-72

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Joseph M. Hughes, M.D., Chairman	1971-72/1971-74
Harvey G. Brown, M.D.	1971-72
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Sheldon Davidson, M.D.	1971-72
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Alfred F. Miller, M.D.	1971-73
Kent L. Pomeroy, M.D.	1971-73
Florian P. Rabe, M.D.	1971-73
Eugene J. Ryan, M.D.	1971-74
Maier I. Tuchler, M.D.	1971-74

AD HOC COMMITTEE ON PROFESSIONAL LIABILITY

Paul B. Jarrett, M.D., Chairman	1971-72
Herbert Dozoretz, M.D.	1971-72
Stanley Karansky, M.D.	1971-72
Philip H. Lahr, M.D.	1971-72
Fred H. Landeen, M.D.	1971-72
Gene Licosati, M.D.	1971-72
John G. McGregor, Jr., M.D.	1971-72
William R. Myers, M.D.	1971-72
Jack H. Wilson, M.D.	1971-72
Woodson C. Young, M.D.	1971-72

MEETING TIME

IT WAS MOVED AND CARRIED TO CONTINUE SUNDAY BOARD OF DIRECTORS MEETINGS AS THIS IS THE MOST CONVENIENT DAY FOR OUT OF TOWN MEMBERS.

ALTERNATE DELEGATE

IT WAS MOVED AND CARRIED TO INVITE THE NEWLY ELECTED ALTERNATE DELEGATE TO THE AMA, WILLIAM B. HELME, M.D., TO THE BOARD OF DIRECTORS MEETINGS FROM THIS DATE FORWARD FOR CONTINUITY AS HIS TERM WILL BEGIN JANUARY 1, 1972.

AD HOC COMMITTEE ON PROFESSIONAL LIABILITY

IT WAS MOVED AND CARRIED TO CHANGE THE NAME OF THE AD HOC COMMITTEE ON PROFESSIONAL LIABILITY LEGISLATION TO AD HOC COMMITTEE ON PROFESSIONAL LIABILITY TO GIVE THIS COMMITTEE MORE FREEDOM IN FUTURE EMPHASIS ON MALPRACTICE PROBLEMS.

OTHER BUSINESS

As directed during the Board meeting held on April 27, 1971, Dr. Landeen reported that the Travelers Insurance Company has reconsidered its position and will allow a choice to the physician between their legal firm and the firm of O'Connor, Cavanagh, Westover, Killingsworth and Beshears.

Meeting adjourned 1:15 p.m.

Edward Sattenspiel, M.D.
Secretary

Directory

THE ARIZONA MEDICAL ASSOCIATION, INC., ORGANIZED 1892, 810 W. BETHANY HOME ROAD, PHOENIX, ARIZONA 85013.

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Vice President—Philip E. Dew, M.D. 5th & Alvernon Sts., Tucson 85711
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Speaker of the House—Charles E. Henderson, M.D. 909 E. Brill, Phoenix 85006
Past President—Fred H. Landeen, M.D. 5402 E. Grant, Tucson 85712
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Delegate to AMA—Seymour I. Shapiro, M.D. #24, 1601 N. Tucson Blvd., Tucson 85716
Alternate Delegate to AMA—Paul B. Jarrett, M.D. 2021 N. Central, Phoenix 85004
Alternate Delegate to AMA—Arthur V. Dudley, Jr., M.D. #24, 1601 N. Tucson Blvd., Tucson 85716

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Central District—George H. Mertz, M.D. 926 E. McDowell, Phoenix 85006
Central District—Wallace A. Reed, M.D. 1040 E. McDowell, Phoenix 85006
Central District—Donald F. Schaller, M.D. 550 W. Catalina Dr., Phoenix 85013
Central District—William G. Payne, M.D. P.O. Box V, Tempe 85281
Northeastern District—Richard B. Johns, M.D. P.O. Box 520, Payson 85541
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Southern District—Henry P. Limbacher, M.D. 116 N. Tucson Blvd., Tucson 85716
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Southwestern District—Glen H. Walker, M.D. 291 W. Wilson, Coolidge 85228

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Vice President—James L. Parsons, M.D. 2430 E. 6th Street, Tucson, Arizona 85719
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Treasurer for Mexico—Hector Huizar L., M.D. Justo-Sierra #385, Guadalajara, Jalisco, Mexico
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Executive Secretary for Mexico—Mr. Alfredo Patron Heriberto Frias #60 Sur, Mazatlan, Sinoloa, Mexico

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HISTORY & OBITUARIES COMMITTEE: John R. Green, M.D., Chairman (Phoenix); Walter Brazie, M.D. (Kingman); John W. Kennedy, M.D. (Phoenix); Harold W. Kohl, Sr. M.D. (Tucson); Abe I. Podolsky, M.D. (Yuma); Roland F. Schoen, M.D. (Casa Grande); Jay L. Sitterley, M.D. (Flagstaff); MacDonald Wood, M.D. (Phoenix).

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PROCUREMENT & ASSIGNMENT COMMITTEE: Donald K. Buffmire, M.D. Chairman (Phoenix); Harry C. Smith, M.D. (Douglas); George H. Mertz. M.D. (Phoenix); Jack I. Mowrey, M.D. (McNary); James T. O'Neil, M.D. (Casa Grande); John R. Schwartzmann, M.D. (Tucson).

PROFESSIONAL COMMITTEE: Albert G. Wagner, M.D., Chairman (Phoenix); Robert J. Antos. M.D. (Phoenix); Robert I. Cutts, M.D. (Tucson); Robert C. Evans, M.D. (Scottsdale); Robert S. Ganelin, M.D. (Phoenix); Rudolf Kirschner, M.D. (Phoenix); Harold W. Kohl, Jr., M.D. (Tucson); Laurence M. Linkner, M.D. (Phoenix); William G. Payne, M.D. (Tempe); Hermann S. Rhu, Jr., M.D. (Tucson); Donald F. Schaller, M.D. (Phoenix); Richard J. Toll, M.D. (Tucson).

MEMBERS ARE URGED TO BRING MATTERS OF INTEREST AND CONCERN TO THE CHAIRMEN OF THE APPROPRIATE COMMITTEE OR TO THE ATTENTION OF ANY MEMBER OF THE BOARD OF DIRECTORS.

AN INVOLVED MEMBERSHIP IS THE BASIS FOR AN EFFECTIVE ASSOCIATION.

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(Society address: 2025 North Central Avenue, Phoenix 85004)

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GEMS Mrs. Carl A. Nau, Jr. (Carolyn)
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Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenamena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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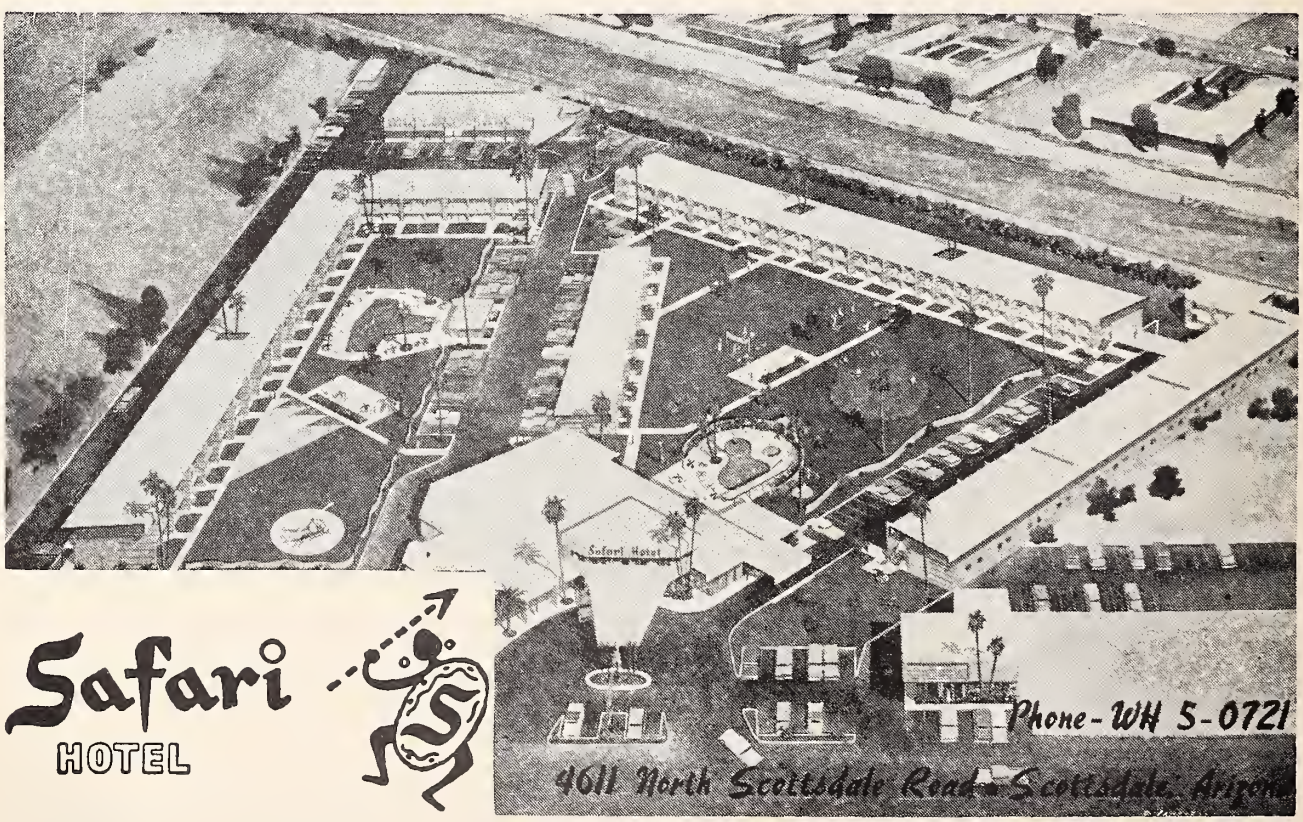
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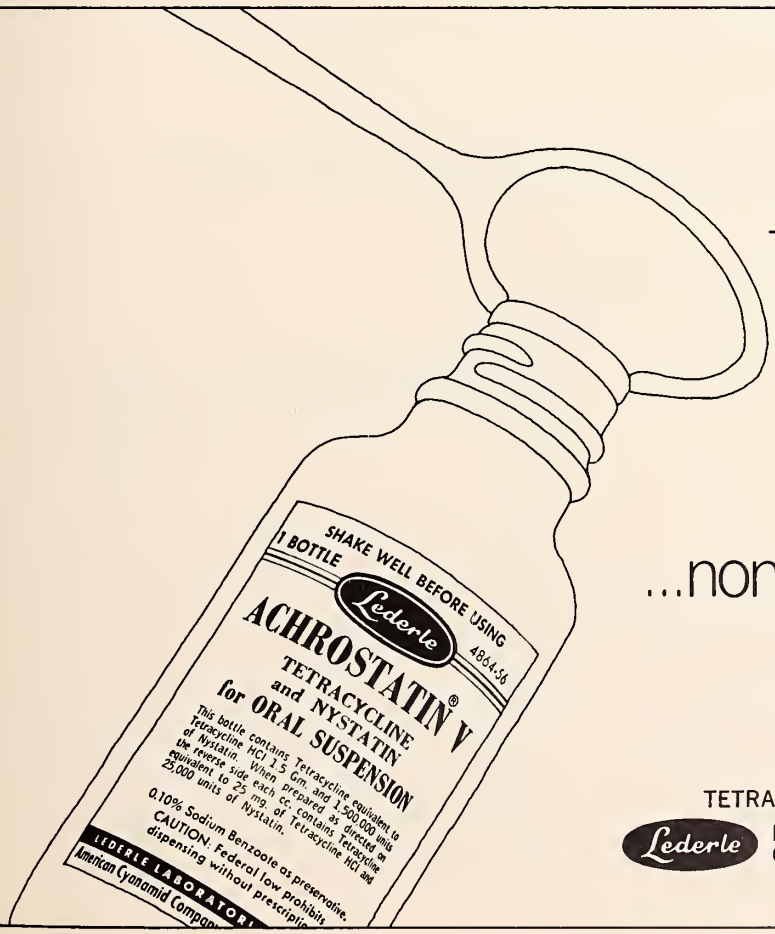
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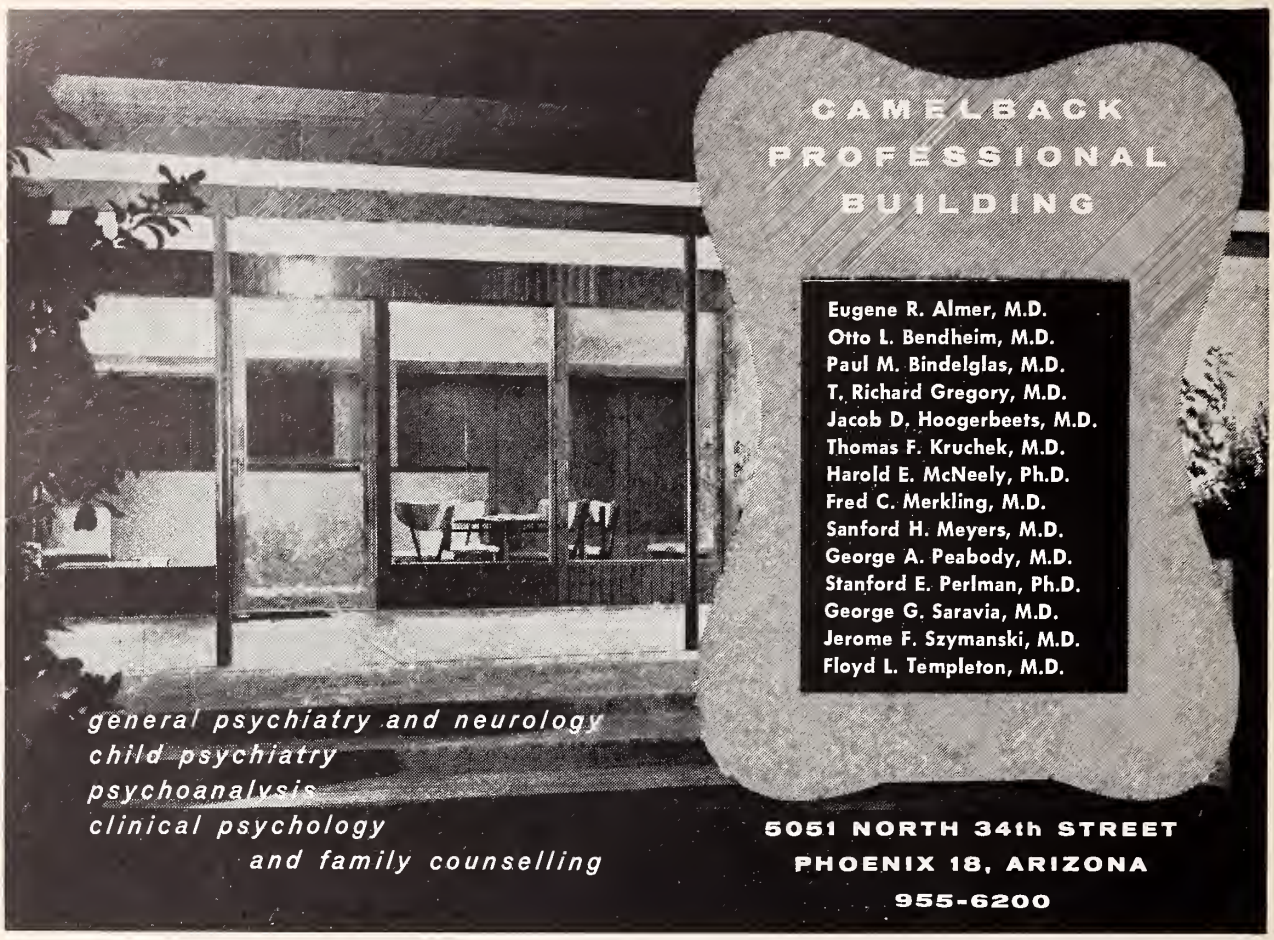
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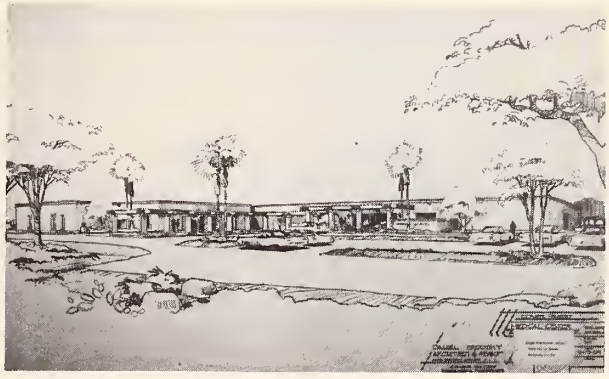
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For additional information, contact Coconino County Medical Society, 1355 N. Beaver, Flagstaff, Ariz. 86001.

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For additional information contact: Medical Society of the United States and Mexico, Executive Secy., Mrs. Virginia E. Bryant, 333 W. Thomas Rd., Suite #207, Phoenix 85013.

OCCUPATIONAL HEALTH CONGRESS

The 31st Annual AMA Congress on Occupational will be held at Jackson Lake Lodge in Grand Teton National Park, Wyoming — Aug. 29-30.

For additional information contact: Louis A. Skiera, Asst. Director, Division of Scientific Activities, Dept. of Environmental, Public, & Occupation Health, AMA, 535 N. Dearborn St., Chicago, Illinois 60610.

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Notice to Arizona Internists and Physicians in Related Specialties:

You are invited to submit papers for Presentation at the Joint Meeting of the American College of Physicians. (Regional Meeting), the Arizona Society of Internal Medicine, and the Phoenix Foundation for Rheumatic Disease Research. This Meeting will be held at the College of Medicine of the University of Arizona on 19 and 20 November 1971.

Abstracts should be submitted to Dr. William Denny, Chairman of the Program Committee, The Veterans Administration Hospital, South Sixth Avenue, Tucson, prior to 15 August 1971.

Accepted papers will be published following presentation in the College issue of Arizona Medicine (April 1972).

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A revealing picture of child abuse patterns is provided by one study of the American Humane Society. More than half of the 662 children involved (all reported in newspapers within a single year) were less than 4 years of age. One fourth of the battered youngsters died; most of these deaths were of children less than 2 years of age. Fathers were more often guilty of child abuse than mothers, but sometimes both parents participated. The study indicated that battered children are not limited to any particular socioeconomic stratum.

***For the complete brochure, and others in the series as they appear, please write to Searle or ask your Searle representative.** Explored in the forthcoming issues will be the history of birth control, the influence of poverty, ethnic factors and marital status, its role in illness, its genetic implications and its effects on the emotional and behavioral life of the individual.

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Call it what you will, it may be premalignant

Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



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Call it actinic, solar or senile keratoses, many regard it as "precancerous."[1,2]

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Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

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References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. **2.** Dillaha, C. J.; Jansen, G. T, and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. **3.** Belisario, J. C.: *Cutis, 6*:293, 1970. **4.** Sams, W. M.: *Arch. Derm., 97*:14, 1968. **5.** Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. **6.** Williams, A. C., and Klein, E.: *Cancer, 25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

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Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

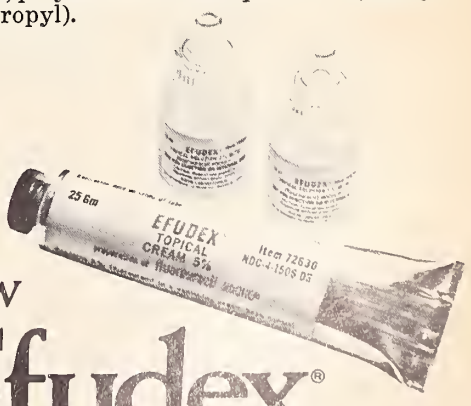
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

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Published monthly by The Arizona Medical Association, Inc., with offices at 810 W. Bethany Home Rd., Phoenix, Arizona 85013. Subscription $5 a year, single copy 50 cents. Second class postage paid at Phoenix, Arizona, and at additional mailing offices.

The Original Articles and Editorials of ARIZONA MEDICINE are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

IF MORE MEN CRIED



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



Big boys don't cry. If more men cried, maybe fewer would wind up with duodenal ulcers. But men will be men—the sum total of their genes and what they are taught. Schottstaedt observes that when a mother admonishes her son who has hurt himself that big boys don't cry, she is teaching him stoicism.[4] Crying is the negation of everything society thinks of as manly. A boy starts defending his manhood at an early age.



Take away stress, you can take away symptoms. There is no question that stress plays a role in the etiology of duodenal ulcer. Alvarez[5] observes that many a man with an ulcer loses his symptoms the day he shuts up the office and starts out on a vacation. The problem is, the type of man likely to have an ulcer is the type least likely to take long vacations or take it easy at work.

The rest cure vs. the two-way action of Librax.® For most patients, the rest cure is as unrealistic as it is desirable. Still, the stress factor must be dealt with. And here is where the dual action of adjunctive Librax can help. Librax is the only drug that com-

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. M., *et al.* (eds.): *Harrison's Principles of Internal Medicine*, ed. 6, New York, McGraw-Hill Book Company, 1970, p. 1444. 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolff's Stress and Disease*, ed. 2, Springfield, Ill., Charles C Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottstaedt, W. W.: *Psychophysiologic Approach in Medical Practice*, Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 163. 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. B. Saunders Company, 1951, p. 384.



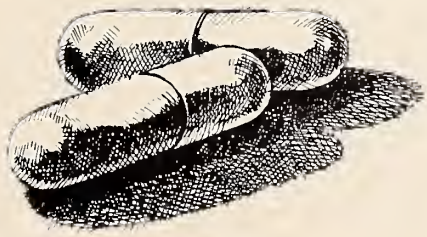
bines the tranquilizing action of Librium® (chlordiazepoxide HCl) with the potent anticholinergic action of Quarzan® (clidinium Br).

Protects man from his own hungry personality. The action of Librium reduces anxiety—helps protect the vulnerable patient from the psychological overreaction to stress that clutches his stomach. At the same time, the action of Quarzan helps quiet the hyperactive gut, decreasing hypermotility and hypersecretion.

An inner healing environment with 1 or 2 capsules, 3 or 4 times daily. Of course, there's more to the treatment of duodenal ulcer than a prescription for Librax. The patient—with your guidance—will have to adjust to a different pattern of living if treatment is to succeed. During this adjustment period, 1 or 2 capsules of Librax 3 or 4 times daily can help establish a desirable environment for healing.

Librax: It can't change man's nature. But it can usually make it easier for men to cope with the discomfort of stress—both psychic and gastric—that can precipitate and exacerbate duodenal ulcer.

Librax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

in the treatment of duodenal ulcer

adjunctive

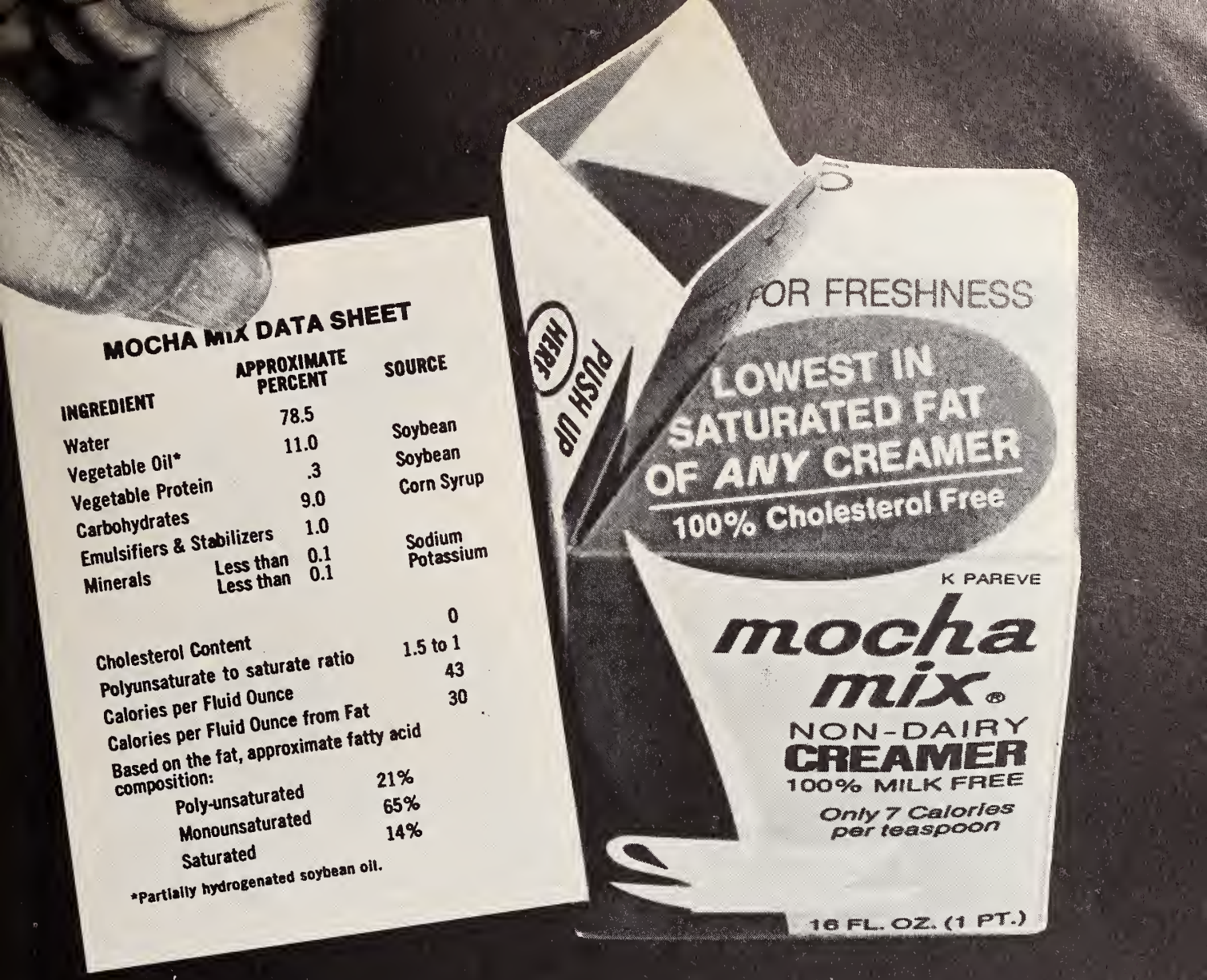
Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

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unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Q103 2/71

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

The girth control pill



Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

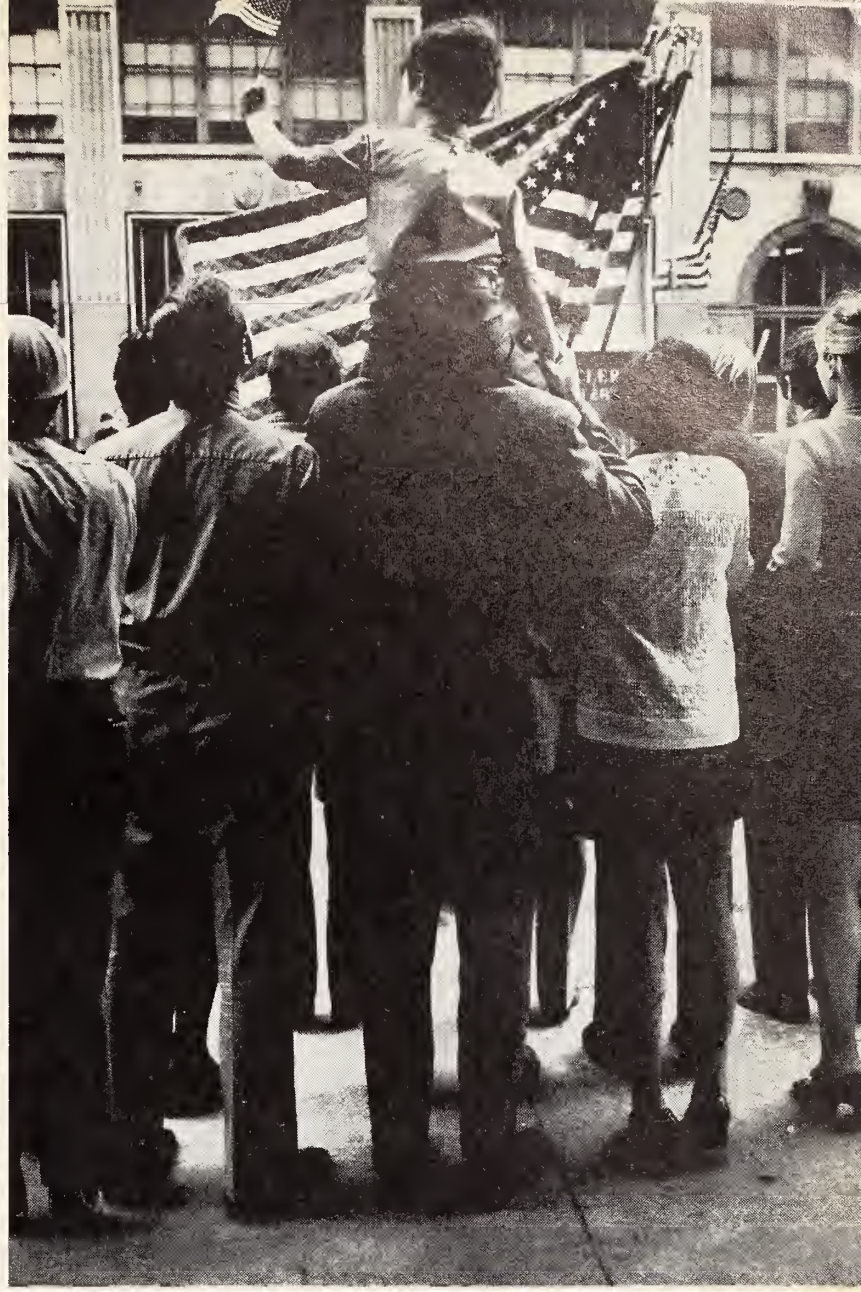
Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U.S PATENT NO 3 001 910

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Picture of low back pain

treated with Parafon Forte® TABLETS

Paraflex® (chlorzoxazone)* 250 mg.
Tylenol® (acetaminophen) 300 mg.

rafon Forte tablets help to relieve pain, store mobility... stop pain-spasm feedback

re is why. PARAFON FORTE provides:

ionsalicylate analgesic equal to aspirin for relief of n,[1,2] yet unlikely to cause the gastric irritation[2,3] or in- ased bleeding time[4] associated with aspirin therapy.

l a skeletal muscle relaxant shown in extensive clinical dies to be useful in a variety of low back disorders[5-7] ut which is not an antihistamine or tranquilizer deriv- ve and is unlikely to produce a tranquilizing or seda- e effect.[8]

escribe PARAFON FORTE for effective spasmolysis and lgesia in acute sprains, strains and myalgias of the er back, including acute exacerbations of chronic con- ions. Your patients will appreciate the restored comfort l freedom of movement it usually provides.

IL LABORATORIES, INC., FT. WASHINGTON, PA. 19034

McNEIL

Contraindications: Sensitivity to either component. ***Warnings:*** *Usage in Pregnancy*—Use in woman of child-bearing potential only when potential benefits outweigh possible risks. ***Precautions:*** Exercise caution in patients with known allergies or history of drug allergies. If a sensitivity reaction or signs or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. ***Adverse Reactions:*** Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely, allergic-type skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions. In rare instances, *Paraflex* (chlorzoxazone) may possibly have been associated with gastrointestinal bleeding. While *Paraflex* (chlorzoxazone) and chlorzoxazone-containing products have been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. ***Usual Adult Dosage:*** Two tablets q.i.d. ***Supplied:*** Scored, light green tablets, imprinted "McNEIL" —bottles of 100.

References: **1.** Batterman, R. C., and Grossman, A. J.: Fed. Proc. *14*:316, 1955. **2.** Goodman, L. S., and Gilman, A., ed.: The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970. **3.** Vickers, F. N.: Gastroint. Endosc. *14*:94, 1967. **4.** Mielke, C. H., Jr., and Britten, A. F. H.: New Engl. J. Med. *282*:1270, 1970 (Corresp.). **5.** Kestler, O. C., and Gyurik, J.: Industr. Med. Surg. *21*:372, 1962. **6.** Forster, S., et al.: Amer. J Orthop. *2*:285, 1960. **7.** Data on file, McNeil Laboratories, Inc. **8.** Friend, D. G.: Clin. Pharmacol. Ther. *5*:871, 1964.

*U.S. PATENT NO. 2,895,877

gastritis



when G-I symptoms demand a potent synthetic anticholinergic

move up to "the Robinul response"

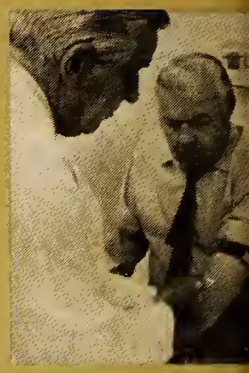
In treating hypersecretion and hypermotility associated with gastritis are you disappointed in the results you've been getting with some of the synthetics? Then *move up* to a potent anticholinergic—Robinul® Forte (2 mg. glycopyrrolate). It provides prompt, pronounced, prolonged suppression of gastric hypersecretion, making it a highly effective agent in gastritis and other upper G-I conditions associated with hypersecretion and hypermotility. Because Robinul Forte exerts a profound antispasmodic action, it is also useful in the treatment of lower G-I disorders, such as functional bowel distress and spastic and irritable colon. If the patient has a "one tract mind" concerning his condition, you can help control the anxiety and tenseness by prescribing Robinul®-PH Forte (2 mg. glycopyrrolate with 16.2 mg. phenobarbital —warning: may be habit forming).

Robinul® 2mg. Forte (glycopyrrolate)

■ **INDICATIONS** Robinul Forte (glycopyrrolate, 2 mg.) and Robinul-PH Forte are double-strength dosage forms of glycopyrrolate. They are primarily indicated for patients who are less responsive to anticholinergic therapy and for control of the more prominent symptomatology associated with acute episodes of gastrointestinal disorders. Emphasis should be on total management, with due consideration of the various therapeutic modalities available, including diet, antacids, anticholinergic agents, sedatives, and attention to emotional problems. Accordingly, glycopyrrolate is recommended in the management of gastrointestinal disorders amenable to anticholinergic therapy, such as: (1) duodenal ulcer, duodenitis, pylorospasm; (2) gastric ulcer, gastritis, esophageal hiatal hernia, hyperchlorhydria, pyrosis, aerophagia, gastroenteritis; (3) esophagitis; (4) cholecystitis, chronic pancreatitis; (5) spastic and irritable colon, ulcerative colitis, functional bowel distress, diverticulitis, acute enteritis, diarrhea; and (6) splenic flexure syndrome, neurogenic gastrointestinal disturbances. When these conditions are associated with psychic overlay, the formulation with phenobarbital may be indicated. ■ **CONTRAINDICATIONS** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte (glycopyrrolate with phenobarbital), sensitivity to phenobarbital. ■ **PRECAUTIONS** Administer with caution in the presence of incipient glaucoma. ■ **SIDE EFFECTS** The most frequent side effect noted during clinical trials was dry mouth. Thirty-three (3.3%) of 1,009 patients receiving 1 to 32 mg. of glycopyrrolate a day complained of dry mouth of moderate to severe degree, but only 11 discontinued treatment because of this. Blurred vision, constipation, and urinary hesitancy have been reported infrequently. Other side effects associated with the use of anticholinergic drugs include: tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash. ■ **DOSAGE** The average and maximum recommended dose of Robinul Forte (glycopyrrolate, 2 mg.) or Robinul-PH Forte is one tablet three times daily (in the morning, early afternoon, and at bedtime). To obtain optimum results, dosage should be adjusted to the individual patient's response. After the more severe symptoms associated with acute conditions have subsided, the dose may be reduced to the minimum required to maintain symptomatic relief. ■ **SUPPLY** Robinul Forte (glycopyrrolate, 2 mg.) is available as scored, compressed pink tablets engraved AHR/2 in bottles of 100 and 500. ■ Robinul-PH Forte (glycopyrrolate, 2 mg., with phenobarbital, 16.2 mg.) is available as scored, compressed blue tablets engraved AHR/2 in bottles of 100 and 500.

A. H. Robins Company, Richmond, Va. A·H·ROBINS

in stable adult diabetes, if diet alone fails...



start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

A Distinctive Oral Hypoglycemic

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Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

DBI®-TD
(phenformin HCl)
timed-disintegration capsules 50 mg.

lowers elevated blood sugar

How to prescribe DBI®-TD (phenformin HCl)

To start with DBI-TD

Week 1 1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal.

Week 2 Continue effective DBI-TD dosage.

If necessary, add an additional capsule to the A.M. or P.M. dose.

Thereafter Continue effective DBI-TD dosage.

To transfer from sulfonylurea therapy to DBI-TD alone: The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

To transfer from sulfonylurea therapy to combined therapy with DBI-TD: The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary. **Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes that is uncomplicated and well regulated on insulin; acute complications of diabetes (metabolic acidosis, coma, infection, gangrene); surgery; severe hepatic disease; renal disease with uremia; cardiovascular collapse, after disease states associated with hypoxemia. **Warning:** Use during pregnancy is to be avoided. Until adequate data on the effects of DBI on the human fetus are available, such use can be considered experimental. **Precautions: Starvation Ketosis,** which must be differentiated from "insulin lack" ketosis, and is characterized by ketonuria in spite of relatively normal blood and urine sugar, may result from excessive DBI therapy, excessive insulin reduction or insufficient carbohydrate intake. Adjustment of DBI-TD or insulin dosage, or supplying carbohydrates, alleviates this state. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING BLOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV


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- ☐ **belladonna alkaloids—for the hyperactive bowel**
- ☐ **simethicone—for accompanying distension and pain due to gas**
- ☐ **phenobarbital—for associated anxiety and tension**

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

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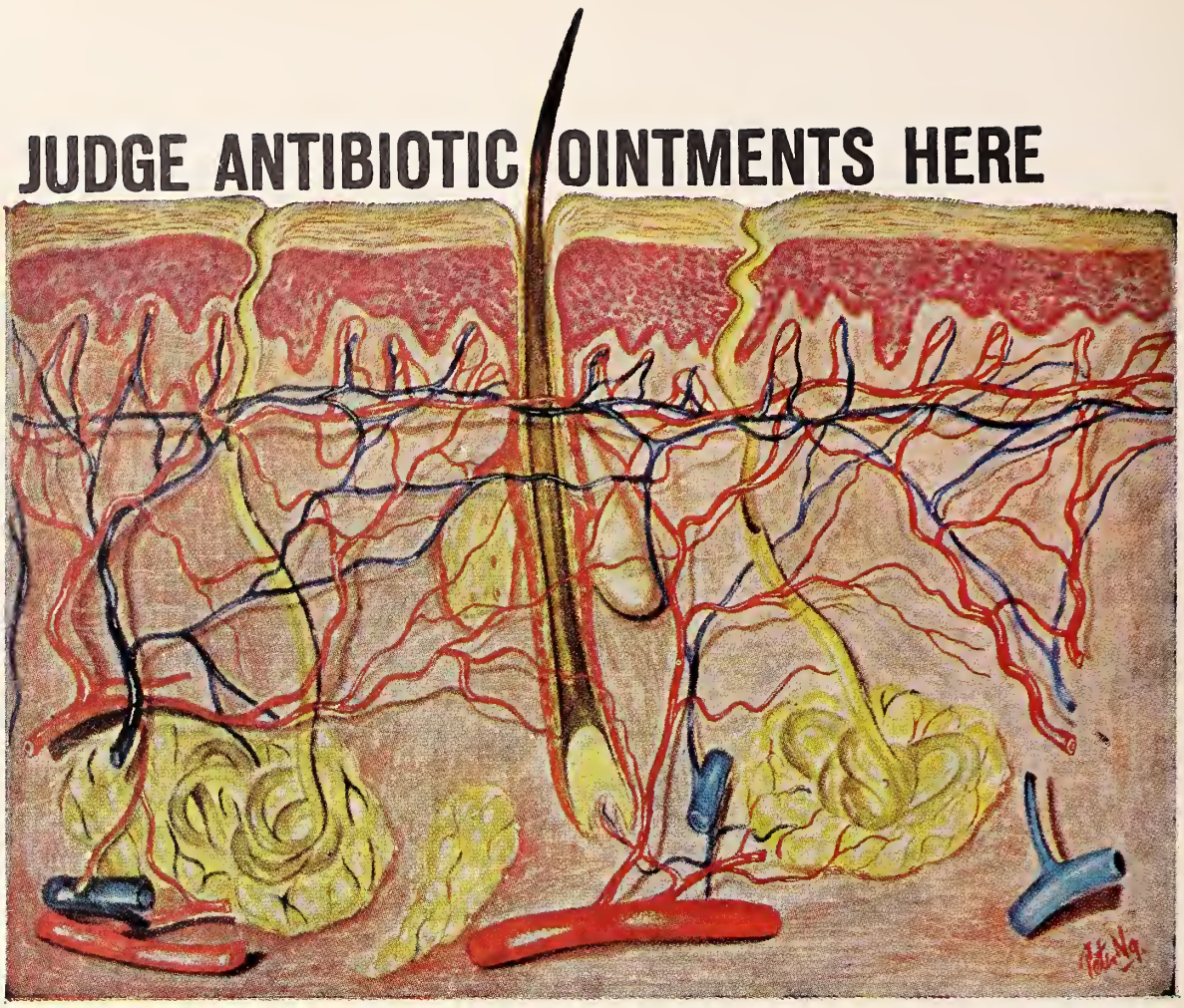
(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

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antispasmodic/sedative/antiflatulent

Spring peeper (tree frog, *Hyla crucifer*): This small amphibian can expand its throat membrane with air until it is twice the size of its head.

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Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

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brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

The causes of vaginitis are multiple



Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Knawn sensitivity ta sulfanamides.
Precautions/Adverse Reactions: The usual precautians far tapical and systemic sulfanamides shauld be abserved because af the passibility af absarptian. Burning, increased lacal discamfart, skin rash, urticaria ar ather manifestatians af sulfanamide taxicity are reasans ta discantinue treatment.
Dosage: One applicatarful ar ane suppasitary intravaginally ance ar twice daily.
Supplied: Cream – Faur-aunce tube with applicatar.
Suppasitaries – Bax af 12 with applicatar.

TRADEMARK: AVC AV-104 2/71 Y-149

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DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

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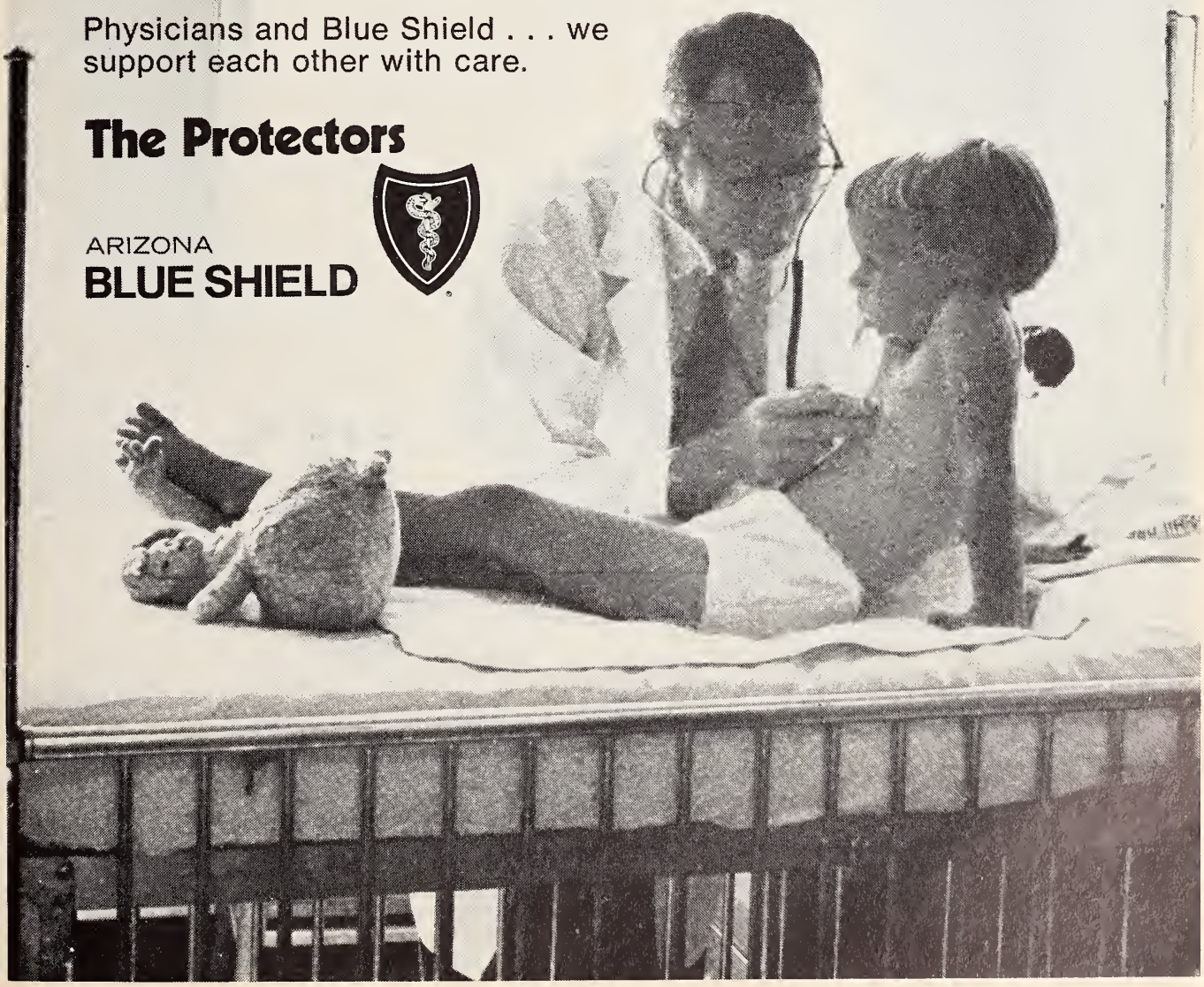
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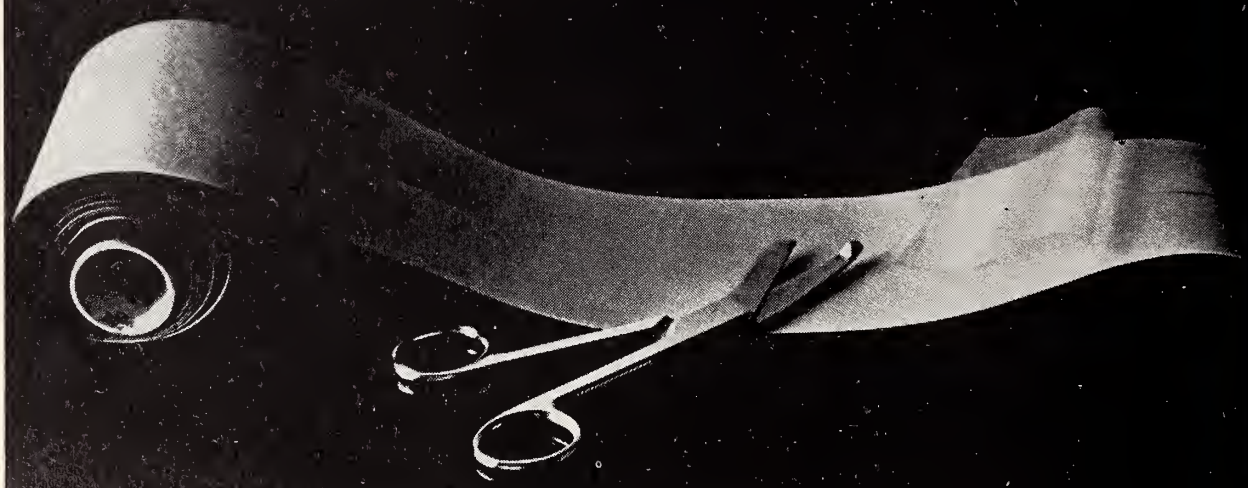
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RHEUMATOID ARTHRITIS IN CHILDHOOD



SUSAN GREGG, M.D.

DEPARTMENT OF PEDIATRICS
ST. JOSEPH'S HOSPITAL & MEDICAL CENTER
PHOENIX, ARIZONA

Juvenile rheumatoid arthritis is a protean disease. It is the major chronic crippling disease of childhood. Estimates range from 175,000 to 250,000 cases[1, 2, 5] currently in the United States alone. This is approximately 5% of all cases of rheumatoid arthritis. The statistics are similar in Sweden where in various series of chronic arthritis 5-7% developed the disease before the

age of 15.[22] The overall mean age of onset is approximately 6.5 years with a range of from 5 months to 15 years. There is a sex predominance of females over males in a ratio of from 2:1 to 3:1 depending on the series.[1, 2, 5]

The occurrence of chronic arthritis in childhood has been recognized for over 100 years. It was in 1897 that George Frederick Still presented his classic treatise in which he described many systemic manifestations of juvenile rheumatoid arthritis (JRA). His name is commonly applied to the acute form of onset of the disease in which systemic manifestations predominate. In 1910 in the German literature Ohm reported the occurrence of iridocyclitis with JRA.[23] The association of amyloidosis and rheumatoid arthritis was first reported in 1903 by Whitman and Spitzy.[27]

In the last 100 years we have managed to gather many pieces of information about this disease as it affects children. And now in 1971 just what do we know about JRA?

Eliology

First, to begin on a negative note, we still do not know the etiology of this disease. Infection, autoimmunity, trauma, and psychologic factors have all been proposed as either precipitating or contributing factors. It has also been noted that there is often a familial predisposition to the disease.

Currently popular is the altered immunity hypothesis for the etiology of rheumatoid arthritis. What information do we have to support this?

1. Rheumatoid factors — present in most adult patients but only a small percentage of children with the disease. Rheumatoid factors and gamma globulins form immune complexes which are phagocytized by leukocytes in vitro or in the synovial fluid in the joint. Subsequently the leukocytes may degranulate, releasing lysosomal and other hydrolytic enzymes into the joint thus evoking a local inflammatory reaction.

2. Immunofluorescent studies have localized rheumatoid factors, gamma globulin, and complement on synovial membranes from patients with rheumatoid arthritis.

3. Infiltration of the synovial membrane with plasma cells and lymphocytes is characteristic of rheumatoid arthritis.

4. Complement levels are consistently lower in rheumatoid effusions than in other types of inflammatory synovial fluid.[5]

A major point against the immune hypothesis is the fact that JRA, or an arthritis that appeals pathologically identical to JRA, occurs so frequently in children with agammaglobulinemia who are unable to produce antibodies.

Or does the increased incidence of JRA in approximately one third of the children with agammaglobinemia suggest an infectious etiology, since these patients would have decreased resistence to infection. The possibility of PPLO being the etiologic organism has aroused much interest, stemming from the unusual characteristics of this organism which can grow on a lifeless medium, the known widespread occurrence of PPLO arthritis in animals, and the development of unusual immunoglobulins with such infections — cold agglutinins, anti-lung antibodies, hemolytic anemia, Stevens-Johnson syndrome.[5] But in spite of the speculation, Koch's postulates have not been fulfilled, and in 1971 we must continue to treat the symptoms of the disease and not the basic cause.

Modes of Onset

The modes of onset of JRA have been well described by several authors.[1, 3, 4, 5] Determining the original mode of onset is quite important in treatment planning. Unfortunately many children are not seen by a physician until after the onset phase which is considered to last up to three months. There are three distinct modes of onset of JRA:

1. Acute or Still's type
2. Polyarticular (adult type)
3. Monarticular

1. **Acute Onset** occurs in 5 to 25% of cases of JRA depending on the series.[1, 3, 4, 5] The mean age of onset is 4.5 years but the peak incidence is 3 years. The sex ratio is 1:1. This group poses the greatest difficulty in differential diagnosis due largely to the unusual lack of articular manifestations other than arthralgia. Systemic manifestations are the most prominent feature. These include fever and rash which are said to have greatest diagnostic significance. Lymphadenopathy, hepatomegaly, splenomegaly, pericarditis, myocarditis, pneumonitis, neutrophilic leukocytosis, acute abdominal pain from mesenteric lymphadenitis are other major manifestations. Cardiac involvement in an untreated child with acute onset JRA may have serious and sometimes fatal consequences. Myocarditis is the most serious form of involvement since it rapidly causes cardiomegaly followed by congestive heart failure. Pericarditis is a benign situation. Endocar-

ditis apparently does not occur. The cardiac murmurs present during rhematoid involvement of the heart are believed to be functional; no form of valvular involvement has been documented.

Fever pattern is felt by some to be the most important clue in the diagnosis of acute onset JRA. The typical pattern is intermittent or quotidian with daily rise and fall to normal. Hyperpyrexia (temperature over 105 F.) occurs only in acute onset form of the disease.

The rash of JRA by virtue of its evanescent nature is unique. It is erythematous, macular or slightly maculopapular, and it occurs on the trunk, neck, and extremities. It is sometimes present for only a few hours. Good regards this exantham "as characteristic of rheumatoid arthritis as the rushes of measles and chicken pox are of their respective diseases."[24]

The leukocytosis may be as high as 100,000, but usually is between 15,000 and 25,000. There is a neutrophil predominance. Other common lab findings include a moderate normocytic, hypochromic anemia, elevation of the sedimentation rate, and normal urine analysis. Serum protein electrophoresis is usually normal but may show decreased albumin and increased alpha-2 and gamma globulins.

In the absence of arthritis or any specific lab test, the early diagnosis of acute onset JRA depends on repeated exams looking for the evanescent rash, characteristic fever pattern, or the soft signs of asymptomatic joint involvement such as painless swelling or limitation of motion or unusual inactivity.

2. **Polyarticular Onset** JRA presents a picture similar to the adult onset pattern and is characterized by involvement of four or more joints. Approximately 50% of all JRA begins in this manner. The sex ratio is 2:1 females over males. Mean age at onset is 7.4 years in Calabro's study.[2] This mode of onset can be abrupt with painful swelling in joints or incidious with few or no complaints of joint pain. Decreased activity in an otherwise active child or lying in a knee flexed position should suggest joint tenderness. Most patients with abrupted polyarticular onset appear ill with listlessness, fever, anorexia, and weight loss.

Common joints involved initially are knees, wrists, ankles, and elbows. Early cervical spine involvement causing restricted flexion, extension, and rotation is also frequent. The $C_2 - C_3$ interspace classically shows first signs of rheumatoid disease.

Although joint findings are the most prominent signs in this form of onset, fever, rash, lymphadenopathy are sometimes present also. The WBC may be moderately elevated, but it rarely exceeds 20,000. Sedimentation rate is usually elevated but presence of rheumatoid factor is rare.

Early radiographic findings include juxta-articular demineralization, soft tissue radiodensities, and premature epiphyseal closure. Transient periosteal proliferation may occur but invariably undergoes resorption.

3. **Monarticular Onset** JRA affects about 33% of all JRA patients. The mean age at onset is 7 years, but most cases appear either between 1 and 3 years or between 11 and 13 years. The patients appear healthy and have few systemic manifestations. The younger ones below 5 years may appear listless and irritable with low grade fever and failure to thrive.

The joint involvement is typically insidious with swelling, pain, stiffness and a pain-relieving limp if the lower extremity is involved. Pain is usually mild except in the hip. The knee is the single most commonly involved joint; tendonitis especially of the heel may also be present.

Although systemic manifestation such as fever, rash, lymphadeonpathy, hepatosplenomegaly are rare in this form of onset, chronic iridocylitis is reported in up to 29% of these children. Laboratory findings often include a normal WBC and sedimentation rate. Histologic examination of the involved joint usually discloses nonspecific synovitis with synovial hypertrophy, increased vascularity, and lymphocytic infiltrate. X-rays may reveal justarticular osteoporosis, metaphyseal overgrowth, periosteal proliferation. There is frequently longitudinal overgrowth of long bones adjacent to the affected joint.

Since acute onset JRA is the most difficult diagnostic problem, let us focus on two important features which have been mentioned briefly above, namely fever and rash.

Fever

Almost 70 years ago Still called attention to the distinctive fever patterns of rheumatoid arthritis in children. In nearly 1000 cases of JRA reported since 1938, fever was noted in 42-90% of the cases.

Calabro and Marchesano reported in the New England Journal of Medicine in 1967[7] on their long-term study — begun in 1958 — which included 50 patients observed over an average of

5 years. Mean age of onset of disease was about 6 years with a range of 5 months to 13 years. Mode of onset was acute in 25%, polyarticular in 45%, and monarticular in 30%. Fever was defined as temperature of 100°F. or higher rectally. Of the total group of 50 patients, 84% (42 patients) had fever. Fever preceded arthritic manifestations in 36% (18 patients) of the total group. Of the 12 patients with acute onset of disease, 100% had prodromal high fever with daily spikes to 103 F. and occasionaly up to 105 F. Of the 23 patients with polyarticular onset of disease, prodromal low grade fever occurred in 22% (5 patients) and there were no instances of prodromal hectic fever. Of the 15 patients with monarticular onset, only 1 patient had prodromal fever low grade in nature. The remainder of the group of 42 patients with fever, namely 24 patients (48% of the total group), had low grade fever occurring simultaneously with appearance of arthritis.

It is of interest that in the group with prodromal fever, the mean period between onset of fever and development of arthritis was 2 years with a median of 3.5 months and a range of 3 weeks to 9 years. The one patient with a 9 year fever prodrome was a 15 year old girl whose fever course began at age 3 years and who at age 12 years when hectic fever ceased developed symmetric polyarthritis accompanied by low grade fever.

Patients with high or hectic fever courses, namely the acute onset group, had characteristic patterns of arthralgia, rash, and variable other systemic manifestations. The young the child, particularly below age 5 years, the more likely a toxic, anorectic, irritable picture. Older children frequently appeared well even at times of fever spikes. Regardless of age, convulsions or shaking chills were exceedingly rare.

The high fever pattern in this group of acute onset patients was quotidian with wide diurnal swings usually greater than 4 degrees. The spike occurred most often at midday or early evening. As the duration of fever increased, the pattern sometimes changed to double quotidian, relapsing, remittent, or periodic. High fever was usually present with recurrences.

Low grade fever was present in 30% of the entire group of 50 patients, either prodromal or simultaneous with onset of arthritis. The fever pattern was again typically quotidian. Two thirds of the patients did appear ill when the low grade fever was present. Although fever was prominent in the early course of such patients, it was frequently absent with persistent or recurrent activity of disease—unlike the course of patients with high fever.

There was significant correlation between high fever and the occurrence of rash, generalized lymphadenopathy, splenomegaly, and leukocytosis. There was no correlation, however, between fever, high or low or none, and the sedimentation rate, sex, age at onset, anemia, presence of rheumatoid factor, and functional class. Fever did not prove of prognostic value.

Fever response to treatment with salicylates was good in the group with low grade fever; the response in the group with high fever was unpredictable. In one case there was no response. Of interest was the authors notation of a "striking lack of correlation between serum salicylate levels in terms of dosage and the therapeutic response." The patients receiving high doses of ASA (100-120 mg./kg.) often had lower serum salicylate levels than the patients receiving low dose (60-80 mg./kg.). None of these patients were on combination therapy, in particular steroids.

Rash

Rash is the other frequent prodromal sign to which much significance is given. Calabro and Marchesano submitted a paper to the Journal of Pediatrics in May 1968[8] which reported the study of the same group of 50 patients in regard to rash. The group had been followed for 9 years. Mean age of onset of disease was 6 years, and duration of active disease averaged 7 years. Acute onset occurred in 25%; polyarticular onset occurred in 45%; monarticular onset occurred in 30%. Rash occurred in 40% of the entire group. This figure is slightly higher than other series in which the average overall incidence was 27%.[24, 25, 26] Rash occurred in 92% of the acute onset group, 26% of the polyarticular onset group, and 20% of the monarticular onset group. Of the total group exhibiting rash at some time, 65% had rash before developing joint manifestations other than arthralgia. Prodromal rash often affected patients with acute onset JRA, occurring in 75% of this group. The average length of prodromal rash was 2 years with a range of 1 week to 9 years. Rash with onset following arthritis occurred in 35% of the total rash group. Duration of time from onset of arthritis to onset of rash averaged 4 years with a range

of 5 months to 11 years. Post arthritic rash occurred most often in patients with polyarticular onset.

Average duration of rash in both prodromal and post arthritic groups was 3.5 years with a range of less than 10 months to 12.5 years. Rash tended to recur, but its appearance or disappearance was independent of the course of rheumatoid disease or therapy. Infections, surgery, emotional trauma, or any type of febrile illness could trigger a recurrence.

The nature of this rash is usually macular or maculopapular and occasionally confluent. Macules have a maximum diameter of 5 mm., larger ones sometimes showing central fading. The rash is initially wide spread but subsequently becomes confined to localized areas, chiefly on limbs, trunk, and less often on face, neck, palms, and soles. It is strikingly evanescent; it usually appears at midday or early evening — similar to the fever of JRA — and it is often accompanied by fever. From day to day the rash characteristically migrates, and the daily degree of erythema is highly variable. Massage, scratching, or heat application will easily intensify faint lesions. Thus areas of skin frequently rubbed or subject to mild trauma are frequent sites of rash.

The Koebner phenomenon may be an aid with diagnosis in a patient with prominent systemic manifestations in the absence of arthritis. This phenomenon is the isormorphic response characterized by the appearance within several minutes of scratching the skin of a susceptible patient of a linear chain of maculopapules. It differs from dermatographia in which the response is immediate and consists of pale, raised linear streaks bordered by erythema.

The JRA rash has generally been reported as non-pruritic, however Schaller and Wedgewood reported 5 cases of rash with JRA in which pruritus was a major discomfort.

Biopsies of skin involved with this rash show slight infiltration with lymphocytes and edema around capillaries and venules, according to Clabro's report.[8] Isdale and Bywaters reported neutrophils to be the principal perivascular cell.[25]

There was significant correlation of rash with fever, especially high fever, lymphadenopathy, splenomegaly, and leukocytosis. There was no correlation between rash and sex, age at onset, anemia, sedimentation rate, or presence of rheumatoid factor. Presence of rash did not prove to be of prognostic value.

The differentiation of JRA rash from that of other childhood rheumatic disorders may pose a problem.

1. Erythema marginatum of ARF: usually larger macules, rarely present on face, palms, or soles, and usually not of prolonged duration.
2. SLE: skin lesions usually on face and arms, lack evanescent nature and regular recurrences with fever.
3. Polyarteritis, Henoch-Schonlein purpura, Leukemia: rash usually develops a purpuric appearance which is almost never seen in rash of JRA.

Iridocyclitis

A major cause of potential disability in JRA is iridocyclitis. Reports of the association of iridocyclitis and JRA first appeared in 1910 in the German literature.[23] Ocular involvement is usually confined to the anterior segment of the eye, the iris and ciliary body. The choroid or posterior uveal tract is rarely involved. Initially the inflammation is characterized by neutrophil resyonse and later by a lymphocyte response. The result of this is the appearance of white cells and protein in the anterior chamber of the eye. Clumps of cells may form keratic precipitates on the posterior surface of the cornea. Parts of iris pigment epithelium may deposit on the anterior surface of the lens. At this point the iris appears slightly constricted and responds sluggishly to light. Fine adhesions (posterior synechiae) may form between the posterior iris and the anterior surface of the lens. These adhesions may become permanent with repeated attacks, causing an irregular nonreactive pupil which will not dilate with drugs. If the posterior synechiae completely block communication between the anterior and posterior chambers, or if cells or protein in the anterior chamber mechanically block outflow of aqueous humor, secondary glaucoma develops.

Sequelae of iridocyclitis are:

1. band keratopathy — from deposits of calcium salts in the interpalpebral area of the cornea, usually beginning at the nasal and temporal edges and moving centrally.
2. cataracts: usually in the posterior lens cohtex.
3. glaucoma

Slit lamp examination is the only way in which the early signs of iridocyclitis can be seen.

Recently there have been two studies of iri-

docyclitis in patients with JRA. One was from the University of Washington by Dr. Schaller et al,[11] the other was from U.C.L.A. by Dr. Calabro et al.[10]

The study from Seattle included 70 children with JRA. Eleven per cent had iridocyclitis (8 patients). However in the subgroup with monarticular onset 29% developed iridocyclitis, while in the subgroup with polyarticular onset 2% developed iridocyclitis. In the subgroup with acute onset disease, no patient developed this complication.

In the U.C.L.A. study which included 100 children with JRA, 8% (8 patients) had iridocyclitis. In the subgroup with monarticular onset 19% developed this complication, while in the subgroup with polyarticular onset the number was 5%.

In both studies, none of the children with iridocyclitis had severe joint disease There was no correlation between activity of joint disease and appearance of iridocyclitis. In both studies it occurred in a small number of cases as the initial manifestation of JRA preceeding joint symptoms. There was no association between elevation of the sedimentation rate, sex, age at onset, presence of X-ray evidence of sacroiliac involvement and the development of iridocyclitis. In the U.C.L.A. study after 10 years of follow up, none of the affected patients fell into the less favorable functional groups III and IV.

Early signs and symptoms of iridocyclitis may be minimal. Once present, the course of this complication is characteristically chronic with long periods of active eye disease and recurrences after the disease appears to have subsided. The complications of band keratopathy, cataracts, and glaucoma are common. One half of the children affected with iridocyclitis eventually suffer severe visual impairment.

Therapy is often difficult and should be entrusted to an ophthalmologist. It is aimed at suppression of inflammation and dilatation of the pupil. Topical steroids and atropine drops are frequently used initially. If there is not a satisfactory response, other forms of steroid treatment such as subconjunctival injections or systemic administration must be tried. Steroids as always are a two edged sword; prolonged topical use may lead to steroid induced cataracts. In the report from Dr. Schaller, 4 patients failed to respond well to systemic steroids, and 2 patients developed iridocyclitis while receiving systemic steroids. Dr. Calabro also reported a patient who developed iridocyclitis while on maintenance steroids.

Topical EDTA therapy has been effective in removing band keratopathy. Cataracts can be surgically removed when mature. Glaucoma can be surgically improved. Unfortunately there have been reports of surgery reactivating the inflammatory process. Patients responding poorly to steroids may derive benefit from cyclophosphamide which has recently been reported as successful in the treatment of iridocyclitis in JRA.

The recommended follow-up on patients with previous iridocyclitis is monthly slit lamp examinations. In the group with monarticular or oligoarticular disease, slit lamp exams should be performed every 3 months even when arthritis is inactive. All other JRA patients should have slit lamp exams at least every 6 months until adulthood at which time attacks tend to be more acute and therefore easily detected without the need of slit lamp exam. Parents should be instructed to watch for tearing or squinting which may be early signs of iridocyclitis and to report them immediately.

Amyloidosis

Amyloidosis is another serious complication of rheumatoid arthritis. In the U.S. JRA is the most common predisposing illness associated with amyloidosis in childhood. The reported incidence in all patients with rheumatoid arthritis has been as high as 60%.[5] These were primarily postmortem studies. The incidence in living patients of all age groups with rheumatoid arthritis is 5-12%. No studies of incidence in JRA alone have been reported. Age of onset of JRA is not related to the later development of amyloidosis. Average age of onset of amyloidosis is 11.2 years, or 5.5 years after onset of JRA, however this complication has occurred as early as age 3 years. The general course before onset of amyloidosis was characterized by persistence of rheumatic activity with progressive joint disease only partially responsive to therapy. Proteinuria was present in 92%; this is the hallmark of amyloidosis. Hepatomegaly or splenomegaly was present in over 75%, and either proteinuria or hepatomegaly or splenomegaly was present in 100%. Cardiac disease was present in 58%.[5, 12]

It is generally accepted that amyloidosis is recognized as a complication of JRA with increasing frequency. Reasons are not clear. Current speculation includes the following:

1. Greater awareness of amyloidosis
2. Changing criteria for diagnosis of JRA
3. Prolongation of life in severe JRA
4. More common use of steroids as treatment in JRA

It has been established that corticosteroids and immunosuppressive agents influence the course of experimental amyloidosis, however there is only suggestive evidence that the relationship holds in man. Since the evidence incriminating steroids as a factor in development of amyloidosis in man is not convincing to date, it is recommended that steroids not be withheld from patients with clinical indications for use. If amyloidosis develops, steroids should be continued as needed to control the rheumatoid disease and its complications. Effective therapy for amyloidosis has not been reported.

Renal Complications

A report on the various types of renal complications of JRA appeared in Acta Rheumatica Scandinavica in 1969.[13] It was from the Rheumatism Foundation Hospital in Heinola, Finland, where 638 patients with JRA were studied between 1951 and 1956. Chronic nephropathy was present in 7.4% of the group, and it was more common in patients with onset of JRA after 11 years. Renal disease was most often observed during the first year of JRA. The group with nephropathy had more severe rheumatoid disease in general than the JRA group as a whole. Other systemic manifestations such as carditis, rash, fever, iritis were present in 40% of the nephropathy group. Nearly all the children with renal complications had been given antimalarial drugs, phenylbutazone, and acetosal at some time during the disease. Corticosteroids and/or ACTH were given to 64% of this group.

The manifestations of renal complications in these patients were the following:

1. Proteinuria: present in 92%
2. Hematuria: present in 38% (found in 50% of patients who had received gold therapy and 40% of patients who had received steroids)
3. Sediment changes – granular or hyaline casts: found in 45% (86% of the steroid treated group, 11% of the gold treated group, and 56% of the group treated with both gold and steroids had these changes)
4. Deterioration in concentrating ability: found in 34% of the total group (present in 57% of the patients treated with steroids and none of those treated with gold)
5. Reduced creatinine clearance: present in 23% (found in 11% of the gold treated group, 29% of the gold plus steroids group, and 25% of the antimalarial and phenylbutazone treated group)
6. Hypertension: present in 21% – usually not until the terminal phase.

The incidence of clinical amyloidosis was 1.6% in this group, however in the fatal cases 50% were found to have amyloid disease.

More pathologic findings were present in patients receiving steroids and/or ACTH than in other therapy groups. However, the fact that several patients in the primarily gold treated group or primarily steroid treated groups had in addition been treated with phenylbutazone at some point in their disease makes it difficult to draw firm conclusions from this study. Phenylbutazone has been incriminated as a cause of renal insufficiency.

Rheumatoid Factor

Cassidy and Valkenburg published a 5 year prospective study of the presence of rheumatoid factor in JRA in Arthritis and Rheumatism in 1967.[15] The study consisted of 110 children and adults with rheumatoid arthritis all of whom had onset before the age of 14 years. Four different techniques were used to test for rheumatoid factor in sera from each patient. Twenty-two percent of the entire group was seropositive; 5% of the group of patients below 12 years was seropositive and 38% of the patient group above 12 years was seropositive. No child below 7 years was found to be seropositive. This percentage positivity contrasts sharply with the statistics on adult onset rheumatoid arthritis in which 75% of the patients are seropositive. There was no relationship between sex, duration of disease, increased degrees of functional impairment, erosive bone disease, level of gamma globulins, presence of band keratopathy, or type of therapeutic program and seropositivity. There was poor correlation with mode of onset, although the highest percentage positivity was found in the polyarticular onset group. There was a high degree of correlation with late age at onset and presence of rheumatoid nodules (82%) and seropositivity. Although a persistent, significant positive rheumatoid factor titer has been considered one indication of a more guarded prognosis, the lack of strong correlation in this study with impaired functional capacity, type of onset, and bone ero-

sion suggests that seropositivity cannot be interpreted as an unequivocal indication of poor functional outcome.

Other studies give figures of 10-30% seropositivity in patients developing rheumatoid arthritis below the age of 12.[2, 3, 5]

JRA Persisting to Adulthood

In 1968 Jeremy, et al, from the University of Washington reported in the American Journal of Medicine on a study of JRA persisting to adulthood.[17] The study was not intended to describe prognosis of JRA since the subjects necessarily had long active arthritis and represented patients severely affected with the disease. There were 46 patients, adults 16 years or over, with symptomatic arthritis of juvenile onset and more than 5 years duration. There was no demonstrable correlation between functional outcome and age of disease onset, duration of disease, sex, or manner of disease presentation. There was no obvious relationship between outcome and types of drug therapy used or history of fever in childhood. There was no correlation between presence of rheumatoid factor and sex, functional status, X-ray changes, or duration of disease. Of the group of 46 patients, 35 maintained adequate function (80%) (classes I and II). This is consistent with the impression that JRA carries a relatively good prognosis.

The clinical picture of patients with long active JRA was similar to that seen in patients with adult onset, polyarticular symmetric arthritis commonly in knees, hands, wrists, and elbows. Yet ulnar deviation was not a common finding even though most patients had chronic involvement of hands and wrists. Systemic manifestations as rash, lymphadenopathy, hepatosplenomegaly, fever, became less prominent as patients approached adulthood. There were 11 patients in this group who experienced severe exacerbation of arthritis in adulthood after many years of apparently inactive disease without deformity. All these patients had mild disease at onset.

Management

Successful management of patients with juvenile rheumatoid arthritis depends on continued reassurance and supervision together with proper instruction to the family of how to care for the patient. Rest must be properly balanced with exercise or other physical therapy. Parents can be instructed on regular exercises to be done at home. Emphasis is on extension rather than flexion exercises. Even during active disease when fever is present, the child should be encouraged to exercise. Complete bedrest must be avoided. Application of heat through baths, packs, or paraffin will help to relieve stiffness and joint pain. Splints worn at night to keep involved joints in proper alignment may aid in preservation of joint function.

Drug therapy is universally required at one time or another or continuously. Acetylasalicylic acid (ASA) continues to be the drug of choice. Dose must be individualized; the suggested starting dose is 90 mg./kg. divided into 5-6 daily doses. In cases of acute type disease with hyperpyrexia, doses up to 130 mg./kg. may be required.[2] Side effects must be watched for. The type of acute toxicity seems to depend on the age of the child. Young children and infants develop intense ketosis, acidosis, and hyperpyrexia, while older children and adults characteristically develop respiratory alkalosis.

Systemic corticosteroids are indicated for the following:

1. Chronic iridocyclitis
2. Vasculitis
3. When disease is life threatening
4. Myocarditis

Short courses of moderate dosage may be necessary in patients with acute disease or those who do not respond to a more conservative drug regimen. Steroids are usually not needed to control rheumatoid pericarditis.

The side effects of steroids include:

1. Reduced resistance to infection
2. Statural growth retardation
3. Glaucoma
4. Cataracts — in up to 12.5% of one group
5. Vertebral collapse from osteoporosis
6. Pseudotumor cerebri

Intra articular steroid injections may be helpful when one or two joints are affected more seriously than others.

Care should be taken when ASA and steroids are used together. Klineberg and Miller reported in 1965[28] that patients on maintenance ASA may develop acute ASA intoxication when steroids are being withdrawn. This fact suggests that steroids somehow alter renal clearance of salicylates.

Gold therapy may be useful in children when their disease fails to respond to other agents. Gold does not appear to be more toxic in chil-

dren than in adults.[19] It should be administered by an experienced physician who is familiar with its side effects which include dermatitis, glossitis, proteinuria, leukopenia, and in rare instances thrombocytopenia and toxic hepatitis.

Chloroquine is a particular dangerous drug in children and is not recommended for routine use. Ingestion of as little as 1 gram may produce rapid cardiorespiratory arrest; no antidote is known.

Phenylbutazona also has serious side effects which include hepatitis, thrombocytopenia, agranulocytosis and renal insufficiency. These have been reported to be more frequent in younger children and may prove fatal.

Indomethacin is likewise not recommended for routine clinical use in children.

Once active disease is suppressed, the drug should be continued for weeks or months before beginning a gradual withdrawal. The drug should never be abruptly stopped.

There is no drug or procedure which can cure rheumatoid arthritis. The aim is to relieve symptoms, lessen inflammation, and prevent or correct deformity. Aspirin remains the drug of choice not because of any remarkable value, but because it can be tolerated for prolonged periods. Other anti-inflammatory drugs, save for steroids, have not been proven superior to aspirin.

Surgery is an important adjunct to drug therapy. Synovectomy has shown encouraging results.[20, 21, 5]

Prognosis

Early in the course of JRA there is no way to determine the ultimate prognosis. In general, the majority of patients with acute onset will follow a polycylic acute disease course; those with polyarticular onset remain polyarthritic; patients with monarticular onset develop oligoarthritis.[5] Early diagnosis followed by a vigorous therapeutic approach offers the best chance of favorable outcome. For most patients the prognosis is encouraging. An excellent functional status was regained 9-15 years after onset of disease in 70-80% of patients in various studies.[1, 2, 5] Yet early death may obtain during the acute onset of disease in a severely toxic form or when amyloidosis develops leading to renal failure or from overwhelming infection related to steroid administration. Unremitting progressive disease lasting into adulthood is uncommon. Yet stigmata of JRA such as micrognathia or stunted growth will remain throughout life. An occisional patient with prolonged remission of up to 20 years may have a severe exacerbation as an adult, but this fortunately is uncommon. The overall incidence of iridocyclitis is as high as 10%; with monarticular onset it is as high as 29%. One half of the children so affected will suffer severe visual impairment. With treatment initiated early, the process can be slowed and often arrested.

Early diagnosis coupled with a vigorous therapeutic approach will minimize or prevent crippling and will thus offer patients with JRA a reasonably normal childhood and adolescence.

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ARIZONA, THE ASTHMA STATE

THERAPEUTIC GUIDELINES FOR STUDENTS, RESIDENTS AND PRIMARY PHYSICIANS

OSCAR SWINEFORD, JR., M.D.

Because of its climate and location, Arizona has a disproportionately high number of severe asthmatics who migrate here for relief of their medical problems. We also have a relatively small number of allergists to help in management of these patients. Therapeutic guidelines are presented to aid the many primary physicians in the management of asthmatics.

Introduction

Many asthmatics respond poorly to treatment elswhere or do not have access to trained allergists. They tend to flock to Arizona.

Nationwide, about five million people have asthma. Another eight to ten million have hay fever, a steady source of new asthma patients.

A high percentage of middle-aged and elderly people have chronic bronchitis and/or emphysema. Sooner or later, respiratory infection, acute heart failure or excessive exposures to pulmonary irritants will precipitate recurrent attacks of asthma, which are difficult to control. Cardiopulmonary crises, precipitated by severe attacks of asthma, are a major cause of death in these people. Arizona's arithmetical share of our five million asthmatics would be about seventy thousand. The actual number is probably much higher. This would mean a patient load per allergist of about three thousand asthmatics, plus the much larger number of other allergic problems. Obviously, there are too few allergists to provide proper care of asthma and other allergic disorders.

The University of Arizona College of Medicine has a rare opportunity, with proper support, to become a leader in the field of allergy. There is probably no public health problem of this magnitude in this country, and especially in Arizona, for which effective methods of treatment are so seldom used.

The solution of this problem will take several years, under the best of conditions.

Meanwhile, a few simple guidelines will enable the primary physician to decrease the suffering and cost to his asthma patients and their demands on his time. Many of the following comments can be applied to other allergic problems.

Some Guidelines For Asthma Management

1. Asthma is a complex syndrome. Attacks can be precipitated by many causes.

2. Asthma management has four phases: Clinical diagnosis, etiological diagnosis, symptomatic and specific treatment.

3. **The clinical diagnosis** is easy. A person has asthma if he has attacks of dyspnea with wheezing and asthmatic squeaks which are present on inspiration but are more prominent on expiration. Orthopnea, cough and sputum are the rule. The clinical diagnosis of asthma is summarized briefly and aptly in two old aphorisms: "All that wheezes is asthma." "Not all that wheezes is not allergy."

Visiting Lecturer In Internal Medicine, University of Arizona College of Medicine, Section of Clinical Immunology, Tucson, Arizona.

4. **The etiological diagnosis** can be easy or extremely complex. Hundreds of things can precipitate attacks of asthma. Foods, inhaled substances, drugs (especially aspirin) and respiratory infections are the most important ones. The history, physical examination and simple adjustments of the diet and environmental air-borne inhalant sources are the most rewarding procedures. **The history** should review in detail: The recognized or suspected ill-effect of every food in the diet, and every prescribed or over-the-counter medicine. The chief ones are penicillin, a frequent milk contaminant, and aspirin, an unexplained frequent cause of asthma, occasionally violent, even fatal. Indomethacin frequently causes trouble in aspirin-sensitive patients. Strangely enough, other salicylates are well tolerated as a rule.

The inhalant history should review the respiratory effects of:

a) **allergens:** house dusts, feather pillows, mattresses and bed covers, upholstered furniture, pets, carpets, musty odors, closets, attics, basements, seasonal exacerbations, cutting the grass, flowers and weeds. Asthmatic ranchers usually have trouble from horses, cattle, sheep, hay, feeds and chicken houses.

b) **nonspecific irritants** such as tobacco and kitchen smokes, fumes, insecticides, detergents, paint, waxes, deodorants, occupational dusts and fumes.

Infection history: Hay fever and head colds are frequently confused. Hay fever rarely causes aches, excessive fatigue, fever, sore throats, regional cervical adenopathy or thick nasal discharges. Sneezing, tears, itching of the nose, eyes and throat in brief recurring attacks are typical of hay fever.

Hay fever is frequently complicated by upper and lower respiratory tract infections.

Cough is a valuable diagnostic symptom which usually differentiates between allergic and infectious asthma. Cough is usually prominent late in attacks of allergic asthma. The allergic asthmatic usually "coughs himself out of an attack." Sputum and nasal discharges are mucoid.

Cough is usually prominent before, during and after attacks of infectious asthma. He "coughs himself into an attack." Sputum and nasal discharges become purulent.

The allergic asthmatic often recognizes the precipitating food or inhalant. The infected asthmatic usually realizes that his attack is more severe and "began with a cold."

Physical signs usually differentiate between allergic and infectious asthma. The more useful etiologic signs are in the nose, throat and sinuses and, strangely, seldom in the chest. A satisfactory examination requires a head mirror, nasal speculum, sinus transillumination, before and after shrinking the nasal mucosa.

In allergic asthma, the mucosa of the nose and throat are pale and often shiny. The turbinates may be swollen and resemble grape-pulp. The uvula is pale and swollen and also resembles grape-pulp. The tip of the uvula is usually translucent. The pharynx, soft palate and tonsil fossae are usually pale. The anterior sinuses transilluminate brightly. Secretions are mucoid.

In infectious asthma, the mucosa of the nose and throat are usually red and swollen. Purulent strands bridge the nasal space, are scattered on the turbinates or in the lateral pharynx. The uvula is red, opaque, swollen and wrinkles grossly when the patient gags. The anterior and posterior tonsil pillars and surfaces are apt to be red with yellow speckles. Vertical red velvety streaks are seen frequently, medial and adjacent to the posterior tonsil pillars. They are assumed to be reactions to purulent postnasal discharges, especially when unilateral. One or more of the anterior sinuses often transilluminate poorly. Pure infectious asthma is unusual — 6% in 100 cases. Sooner or later allergic asthmatics contract respiratory infections. Physicians who assume responsibility for the treatment of asthma must be prepared to recognize allergic and infectious asthma which can occur alone or together.

Miscellaneous comments. Crepitant rales usually mean infection. Localized inspiratory stridor indicates **partial bronchial obstruction** at that point. Areas of faint breath sounds indicate marked hypo-ventilation which, if they persist, are ominous signs. Unequal visible or palpable expansion of one lung or lobe can be ominous also, especially if it develops during an attack.

The louder diffuse squeaks sound on auscultation, on both inspiration and expiration, the more easily the attack will respond to routine symptomatic remedies.

Chronic emphysema is usually manifested by: elevated ribs; increased A-P diameter of the chest after expiration; soft breath sounds; faint heart sounds; louder heart sounds below the

xyphoid; tiny venules along the diaphragm attachment; plethoric tongue, nails and lips, tobacco stained fingers, diffusely red "smokers nose and throat" and the history of dyspnea on exertion between attacks. Attacks of asthma in such patients, especially when due to infection, often develop into status asthmaticus and life-threatening pulmonary crises. Immediate hospitalization is indicated when attacks do not respond promptly to symptomatic remedies.

Cardiac asthma is likely when: The patient seeks fresh air; has elevated blood pressure; is obviously frightened; has moist rales in the lung bases; raises frothy sputum; has a cold sweat and an unduly rapid pulse. Signs of right heart failure are usually absent. Prompt relief by oxygen or by actual or "bloodless" phlebotomy (using tourniquets on all four extremities) are diagnostic.

Symptomatic treatment of asthma should be considered under four headings: Prevention and relief of mild attacks, treatment of severe attacks and of status asthmaticus.

1) Attacks which occur at certain times of day or night can be prevented, as a rule, by prescribed self-medication.

2) Mild attacks are relieved the same way. Every asthmatic should have on hand:

A. A PILL containing about 25 mg each of Ephedrine and a sedative (usually a barbiturate), 130 mg of a theophylline preparation and if tolerated, 320 mg of potassium iodide. Quadrinal, tablet or liquid, is the most popular preparation which contains all four of these drugs. Tedral, Amesec, and dozens of other mixtures contain all but the potassium iodide. Long acting pills, Tedral for example, often provide relief for six to eight hours — others for three to four hours.

Ephedrine relaxes bronchial muscle and shrinks swollen bronchial mucosae by stimulating both alpha, beta 1 and 2 sympathetic nerve receptors.

Theophylline preparations (methyl-xanthine compounds) Aminophylline, anhydrous theophylline and theophylline calcium salicylate relax bronchial muscles. Two interesting new observations have shown that sympathomimetics and methyl xanthines: a) prevent the release of histamine and SRS-A from sensitized mast cells and b) are more effective together than alone.

Sedatives in small doses are used to neutralize the undesirable nervous tension cased by those two drugs. There is no evidence that, in the doses recommended, the sedatives allay anxiety caused by the asthma. There is overwhelming evidence that over-sedation may convert severe attacks into pulmonary crises.

Potassium Iodide is dramatically, but unpredictably, effective in an occasioinal case, both prophylactically and to relieve attacks. Its use is empirical.

Pills or liquids like these should be taken promptly at the beginning of an attack or 30 to 60 minutes before an attack is due or it is necessary to be exposed to an asthma-causing inhalant. They can be taken every three or four hours as needed. A second pill may be needed and tolerated, if the first one doesn't relieve the attack in 20 to 30 minutes. These mixtures should not be used if they are not effective or if they cause tension, palpitation, tremors or other undesirable effects.

B. **Aminophylline suppositories** or packaged retention enemas, 0.25 to 0.5 gm, if tolerated. Nausea may help to relieve asthma. Excessive vomiting can be disastrous in dehydrated children and the elderly. Effective doses are seldom tolerated by mouth. Suppositories or enemas often cause excessive rectal irritation.

C. **Sympathomimetic aerosols.** Isuprel 1:200, under many names and forms, is the most widely used. It stimulates the beta sympathetic nerves which then relax the bronchial smooth muscles. Aerolone Compound contains weak Isuprel (1:400) and an alpha sympathetic stimulator which constricts the small bronchial vessels and hence, shrinks the swollen mucosa and submucosa. This is preferred by many allergists and patients because overdosage is unusual, it is cheaper and often more effective.

Aerosols are best given by a DeVilbiss #40 nebulizer, in series of five whiffs of the aerosol fog, until relieved — usually by 10 to 15 whiffs. Rapid firm squeezes of the rubber bulb of the nebulizer, just within the open mouth, produces a dense fog which should be inhaled from complete expiration throughout one deep inspiration. This is one whiff. Aerosols are useless unless the fog is dense and deeply inhaled. The physician must teach the patient or parent how to use the nebulizer effectively and how to keep it clean. Relief begins in about five minutes when aerosols are effective and lasts about an hour. **Excessive use** of the nebulizer and other self-medications is one of the commonest causes of critically severe status asthmaticus. Propellants

used to nebulize Isuprel have been shown to be irritating to the already irritated bronchi of many asthmatics.

Di-Sodium Cromoglycate, a new aerosol seems to be effective if used prophylactically before an anticipated exposure to a known allergen. Relief may occur otherwise, but is unpredictable. Cromoglycate can be tried to prevent attacks of allergic asthma, when other remedies fail. It **does not** relieve an attack after it starts. Several new aerosols, supposedly blander and more effective analogues of Isuprel, are being studied.

3) **The physician** should start treatment promptly when self-medication, which he has prescribed, does not relieve an attack. Four remedies will relieve perhaps 98% to 99% of all attacks of asthma. They are adrenalin, intravenous aminophylline, prednisone or an analogue, and antibiotics for infection.

Adrenalin (1:1000) in doses of 0.2 cc s.c., repeated once or twice at 10 to 15 minute intervals if necessary, will usually suffice. Do not repeat any dose which causes subjective nervousness or palpitation tremor of the tongue or fingers, or which increases the pre-adrenalin blood pressure by more than 10-15 mg/Hg or the pulse rate by more than 10-15 beats per minute. More adrenalin may make the asthma worse. Patients or parents can be taught to give adrenalin at home, **with proper precautions,** if they are intelligent and cooperative enough to avoid contamination. Self-treatment with insulin has been used for over 30 years.

Intravenous aminophylline must be used promptly when adrenalin fails to give relief. 500 mg is the usual adult dose. The cheapest and easiest way is to use the 2.0 cc preparation (labelled for intramuscular use) and a 23 gauge needle. Do not, however, give aminophylline intramuscularly or subcutaneously. It is extremely painful and may cause local injury. Inject 0.1 cc into the vein, suck 0.1 cc of blood into the syringe. Repeat this sequence until the syringe contains pure blood. Then reinject the blood. This takes about five to eight minutes, done leisurely. Stop the infusion temporarily if adverse subjective reactions occur. Leave the needle in the vein. Resume the injection in a minute or two unless the patient becomes extremely nauseated or vomits, or if angina, increased anxiety or dyspnea occur. A brief period of nausea and vomiting often relieves asthma. Intravenous aminophylline may intensify cardiac asthma due to coronary insufficiency. Excessive vomiting may precipitate pulmonary crises in dehydrated, exhausted elderly or pediatric asthmatics. Allergic asthma rarely fails to respond to adrenalin and aminophylline. Slow intravenous infusions rarely relieve severe asthma. Intravenous infusions provide glucose, fruits and electrolytes when the patient is too sick to drink about 2000 cc of nourishing liquids, daily. Be sure the liquids are not known causes of his asthma, especially milk. Solid foods should be withheld until requested by the patient. If added to the infusion, the aminophylline should be injected separately within about 8-10 minutes. The supplementary effects of adrenalin and aminophylline have been mentioned.

Prednisone is as effective as its more expensive analogues. It is seldom needed to relieve **allergic asthma.** It should never be used then, until the simpler remedies have failed.

Infectious asthma is a different problem. Conventional symptomatic remedies, described above, are frequently inadequate. Most infected asthmatics have a prodromal pattern which they and their physician can recognize. Prompt treatment of infectious asthma will usually prevent status asthmaticus and more serious pulmonary crises. Infectious asthma attacks are precipitated as a rule by: a) epidemic respiratory viruses, b) exacerbations of idiopathic chronic bronchitis or bronchiectasis or c) exacerbations of acute or chronic sinusitis, often induced by virus infections.

Initial treatment of attacks of infectious and allergic asthma should be the same. Cultures should be made as soon as the role of infection is recognized. Cultures should be made of nasal secretions, throat and sputum. Haphazard cultures are a waste of time, money and potentially useful information. Antibiotic sensitivity tests should be made on all organisms which grow. So-called normal flora become antigens and pathogens in inflamed respiratory mucosae. Antibiotics which **do not suppress** or kill the so-called nonpathogens, frequently do not relieve infectious asthma, until supplemented by those which do.

Tetracycline and erythromycin, 250/mg of each, AC & HS, is the most effective empirical combination. This combination can be changed, if not effective, when culture and sensitivity tests are reported. Effective antibiotics should be continued for 5 to 7 days or longer after the attack

is completely relieved. Failure to do this is almost invariably followed by recurrent attacks.

It is essential that detectable sinusitis, by physical and x-ray examinations, be ruled out in every attack. Post-attack quiescent sinusitis will, predictably, flare up and cause more attacks. The rhinologist is a necessary associate in these cases. Reversible sino-bronchitis frequently complicates and is erroneously diagnosed as the irreversible, idiopathic, chronic smokers' bronchitis which co-exists so frequently with emphysema.

Fortunately, respiratory virus infections are usually transient. Antibiotics are effective only against so-called secondary invaders.

Most obviously infected asthmatics who get to an allergist have failed to respond to penicillin and its newer analogues. This, plus frequent sensitization to penicillin, are why tetracycline and erythromycin are the first choice of preculture antibiotics. Antibiotic relef of infections is often delayed 2 or 3 days. This is a critical period.

Prednisone, a potent anti-inflammatory agent and lysosome protector, should be started with antibiotics as soon as conventional symptomatic remedies fail to provide prompt and marked relief. As with antibiotics, relief from prednisone is delayed. It is unusual for prednisone relief to begin short of 8 to 12 hours, occasionally 20 to 24 hours. This can be a critical time, particularly if prednisone and antibiotics are not started promptly.

Prednisone dose schedule: The first, primary dose should be large, 20 to 40 to 60 mg by mouth, depending on the severity of the attack. 10 to 20 mg, AC and HS, should be given until conventional remedies become effective, usually 48 to 60 hours. Prednisone should be stopped abruptly, if relief is striking, within 84 to 96 hours or less. If relief is delayed, but obvious, reduce the doses by 10 mg per day. If no relief, the dose should be doubled or tripled and the patient admitted to the hospital for careful search for other causes.

Intravenous steroids are expensive and, in a slow drip, less effective than by mouth. Rapid infusions are no more effective than by mouth.

Maintenance doses of prednisone or its analogues **are never justified** until the patient has failed to respond to specific treatment by a trained allergist. Far too many asthmatics are victims of side effects of carelessly prescribed prednisone, given more as a placebo for the doctor than for the good of the patient. Seasonal exacerbations of asthma can be controlled frequently by PRN 3-day courses of 30 to 40 mg of prednisone 3 to 5 times during the season if, but only if, conventional remedies are not effective.

When added to tolerated conventional remedies, maintenance doses of prednisone provide a reasonably comfortable existence to the few asthmatics who do not respond to specific and other symptomatic treatment. In every case, the risks must be weighed against the benefits. Every physician makes similar decisions daily. There is no safe dose. 5 mg daily are tolerated by many but not all asthmatics. Side effects increase and resistance to unusual stress (infection, injury, surgery, etc.) decreases as daily doses increase. Schemes to avoid these dose-related complications have not solved this problem. It is imperative that the patient and physician should remain alert to the fact that the prednisone doses should be increased promptly whenever stressful complications occur.

A Medic-Alert bracelet, or similar list of all medicines being taken, should be worn or carried by the patient at all times.

ACTH is expensive and has limited value in asthma. It can release a maximum of about 20 to 30 mg of prednisone-like steroids. ACTH is an antigen or hapten which occasionally elicits severe allergic reactions. It has one decided advantage. It does not induce the Cushingoid-adreno-cortical deficiency which invariably follows prolonged excessive use of prednisone and its analogues. It is an interesting but not very useful clinical observation that asthmatics tolerate steroids slightly better than rheumatoid arthritics.

All of this adds up to the fact that, except for short occasional 3 to 4 day courses, prednisone and its analogues should not be used until all other specific and symptomatic treatment has failed.

Obviously, the doses of each of these symptomatic remedies should be adjusted to the age, size, needs and tolerance of each patient. Liquid preparations are available for children.

Specific treatment of asthma: Respiratory infections should be treated vigorously, if present. Then every food, drug, specific and nonspecific inhalant, suggested by the history, should be avoided **rigidly** for two weeks. **If no striking improvement,** the normal diet and environmental inhalants can be resumed abruptly. If improvement is striking, the avoided foods should be

tried, one every four days. After a comfortable diet is found, the inhalants can be added to the environment, one at a time. In either case, if re-exposure to a food, drug or inhalant causes any symptoms, it should be removed immediately. The next exposure should be deferred until that reaction has subsided. Each food or inhalant which causes symptoms should be avoided completely and indefinitely. Those which cause no symptoms on trial exposures can be used freely.

Suspected foods and drugs can be avoided completely. Complete avoidance of inhalants is not always possible. Excellent results often follow: removal of all pets, rugs, draperies, smokes and odors plus a) dust-proof covers on all pillows, mattresses and bed springs and b) the avoidance of attics, basements, moldy places, flowers and freshly cut grass.

Asthma, which does not respond to such a program should be referred to an allergist for comprehensive skin tests, more detailed food and inhalant avoidance advice and, if indicated, a long-range program of hypo-sensitization.

Current routine virus and broad spectrum bacterial vaccines which include normal respiratory flora are often, but not predictably, helpful in recurrent infectious asthma. Bacterial vaccines should be started with 1:1000 dilutions and increased gradually once or twice a week, usually with other allergens.

A word about oxygen. Oxygen does not relieve asthma! Acute cardiac asthma is the only exception. Some eight or ten actual or potential adverse effects of oxygen in asthma have been reported. Oxygen should not be used until clinical signs, supported by arterial PO_2, PCO_2 and pH determinations indicate a critical level of decreased air exchange. Oxygen should be given in the intensive care ward in the hospital under close supervision. It is important to remember that oxygen and bronchial aspiration are emergency, often life-saving, procedures, which do not relieve asthma, per se. They do buy valuable time for asthma remedies to become effective. These emergency procedures are rarely necessary when attacks of asthma are properly assessed and treated as soon as they start.

The Departments of Medicine and Pediatrics at the College of Medicine are acutely aware of and are trying to meet the asthma problem. They have two goals: One, to train enough allergy specialists to treat problem cases of asthma and other allergic disorders; two, to teach their graduates to treat simple cases of asthma, hay fever, urticaria and eczema as effectively as they do heart disease, diabetes, peptic ulcer, anemias and other nonsurgical diseases. The major obstacle to those goals is a properly trained and dedicated staff of clinical allergists. Such a staff will, automatically, start research projects aimed at better care of asthma and related syndromes.

Summary

Arizona is the Asthma State. Few medical schools prepare their students to treat asthma properly. Most of the 25 Arizona allergists live in Tucson or Phoenix. The patient load is excessive. It will be several years before the Arizona Medical College Allergy Training Program can begin to meet the needs of those asthmatics who do **not** have access to the too few Arizona allergists. The guidelines above were designed to help primary physicians, medical students and residents to provide better care for their asthma patients. The guidelines are discussed under the headings: Clinical Diagnosis, Etiological Diagnosis, Symptomatic and Specific Treatment. Emphasized are:

(1) Simple methods for relief of attacks by self-medication and more technical methods to be used promptly by the physician, when home remedies fail.

(2) The essential clinical differences between allergic and infectious asthma.

(3) Methods by which the physician can treat simple cases of asthma specifically.

(4) The importance of early recognition and treatment of infectious asthma, the major source of status asthmaticus and pulmonary crises.

(5) Space did not permit adequate discussion of the roles of chronic lung diseases; acute left ventricular failure; naso-pharyngeo-broncho-bronchial reflexes; localized bronchial obstructions; abnormal responses to heat, cold, humidity changes and emotional stress. These causes of asthma determine, to a significant degree, the incidence, severity and proper treatment of asthma.

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Hospital Admissions Pulmonary Function Screening Project

MURRAY SPOTNITZ, M.D., F.A.C.P.
JOHN L. FRIEDMAN, M.D,, F.A.C.P.
PRESTON SMITH, M.D.
BEN CHAIKEN

Background

A hospital admissions pulmonary function screening project was launched in three Phoenix hospitals to facilitate case detection of impaired lung function among hospitalized patients by providing physicians with a rapid, inexpensive, easily understood screening test of ventilatory function.

Since history, physical examination and chest x-rays often fail to detect the presence of impaired lung function, many patients hospitalized on medical and surgical services develop pulmonary complications which might have been prevented had the physician been aware that a potential problem exists. These complications lead to prolonged hospitalization, disability and death.

Although the major hospitals in Phoenix have pulmonary function laboratories equipped to provide the needed information on lung function, many physicians are loathe to use these facilities. There are many reasons for this, but the variety and complexity of the tests available making the physician uncertain as to which tests to order and how to interpret them, is probably a major stumbling block to proper utilization of existing facilities.

A rapid, simple, easily understood, inexpensive screening test of lung function would undoubtedly encourage physicians to routinely check their patients for impaired lung function. Such a test is the volume of gas expired over the first second of a forced expiration after a full inspiration ($FEV_{1.0}$). This test can be performed with existing equipment at the major hospitals and requires no additional training of personnel. It requires minimal patient understanding and can be accurately performed by a technician in a few minutes. It correlates well with impaired lung function and pulmonary disability of all types. The results can be interpreted by a technician as normal or abnormal according to predetermined criteria and would, therefore, not demand time of physicians or secretarial personnel.

Protocol

The Arizona TB & Respiratory Disease Association assisted Good Samaritan Hospital, St. Joseph's Hospital and St. Luke's Hospital in instituting a rapid, inexpensive, simple screening test of pulmonary function on hospital admissions. It was anticipated that the availability of such a test would enable physicians to more easily recognize patients with lung diseases and, armed with this knowledge, take appropriate measures to forestall pulmonary complications during and following the patient's hospitalization.

The project was designed as a pilot study to determine if physicians on the staffs of the various hospitals would avail themselves of a simple test to determine whether patients admitted for diseases other than that of the respiratory tract have impaired lung function. The project was to continue for approximately three months.

Equipment for the tests and the techniques were already present at all hospitals and no new equipment or training of personnel was required. The test can be performed in a few seconds per patient and did not place a great burden on the existing facilities of the participating hospitals. No charge was made to the patient for the test. Since the interpretation of the test was made by a predetermined plan, no physician time was required. No additional secretarial help was needed since the pulmonary technician merely checked the appropriate box on a specially designed form and returned the results to the floor.

The ward clerk stamped the order sheet on all admissions except pediatric, OB or chest disease cases.

When the physician requested pulmonary function screening, the clerk filled in the request form (see Figure 1) in duplicate including patient's identification stamp, age, sex, height, weight, referring physician and admission diagnosis. The form was then forwarded to the pulmonary function laboratory along with the requisition for the screening test.

The pulmonary technician requested each patient to come to the pulmonary function lab for the test. Spirometric tests (Forced Vital Capacity without the use of bronchodilator) were performed according to the technique of Tiffenaeau and Gaensler.

The FORCED EXPIRATORY VOLUME for one second ($FEV_{1.0}$) was measured and compared to the predicted value for $FEV_{1.0}$ (prediction nomogram, Kory et al Am J. Med. 1961). If the value was 80% or more of predicted, the test was considered normal. If the value was less than 80%, abnormal. Tests determined to be invalid were recorded. The original request form

was returned to the floor and the copy retained in the pulmonary function laboratory. The numerical values for predicted, observed and % $FEV_{1.0}$ was entered on the duplicate reporting form retained by the pulmonary function laboratory.

Figure 1
Sample Report Form
Pulmonary Function Screening Project
Screening Test

Patient Name
Age Sex
Height Weight
Referring Physician
Diagnosis
Ventilatory Function ($FEV_{1.0}$) is:
() Normal
() Abnormal
() Invalid for interpretation

Findings

The data obtained from the study is presented in the following tables:

Table 1
Summary of Pulmonary Function Screening Project in 3 Phoenix Hospitals

Number of Valid Tests	592
Number of Abnormal Tests	274
Percent Abnormals	46.3%

Table 2
Age Specific Data

Age Group	Number of Abnormals with Screening Test	Percent with Abnormal Screening Test
Under 30	29	10.6
31-50	67	24.4
51-60	55	20.1
61 plus	123	45.0

Table 3
Abnormal $FEV_{1.0}$ Screening Tests

		Number Abnormal	% Abnormal
Mild Impairment	$FEV_{1.0}$ 79-65%	142	51.9
Moderate Impairment	$FEV_{1.0}$ 64-50%	69	25.1
Severe Impairment	$FEV_{1.0}$ 49% or less	63	23.0

Discussion

A Pulmonary Function Screening Project was launched in February 1970 in three hospitals in the city of Phoenix. These hospitals were chosen because of the quality of their pulmonary laboratory and the overall supervision of chest physicians affiliated with the hospitals. The hospitals were St. Luke's, St. Joseph's and Good Samaritan.

All patients admitted to the hospitals over the age of 18 were eligible for screening. Screening tests were performed only when requested by the admitting physician, without charge to the patient. Admitting physicians were instructed to exclude patients with known or suspected lung disease from receiving pulmonary function screening tests.

Special report forms were used. Results were recorded in duplicate, one copy made a part of the patient record, another copy retained in the Pulmonary Function Laboratory. Two of the hospitals found it more expedient to computerize the project, allowing for more rapid results on patients tested and obviating the need for a special report form.

Data collected revealed that almost half the referrals had abnormal studies (see Tables). In analyzing the diagnoses of patients, it was realized that a number of patients had preexisting diseases which should have excluded them from the screening project.

It is possible that some admitting physicians may have suspected their patients had impaired lung function and therefore requested a screening test. Regardless of possible referring physician bias, a number of important points can be listed:

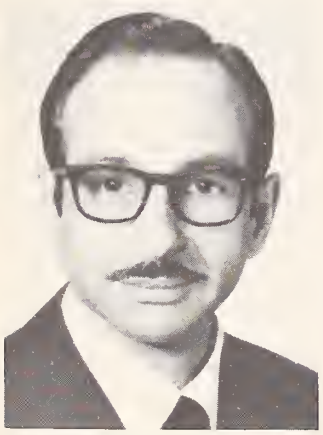
1) Existing facilities for lung function testing at these general hospitals in Phoenix are adequate to routinely screen hospitalized patients.
2) No great strain was put on laboratory equipment or technicians.
3) The $FEV_{1.0}$ screening test for lung function is a simple, effective screening procedure.
4) No adverse effects were experienced by patients tested.
5) A large number of admitting physicians availed themselves of the screening project.

Detecting abnormal lung function could have great significance particularly for the preoperative evaluation and general management of patients with diseases of other organ systems. One hospital in the study is contemplating performing pulmonary function screening on all presurgical patients. Another hospital in the study will be performing routine pulmonary function screening on all adult patients admitted to the hospital.

A cardinal principle was followed in the screening project. No screening project should be undertaken unless there is assurance a physician who is treating the patient receives the information. This tenct was adhered to by using the admitting physician and the hospital as the framework for the project.

The pulmonary screening test for hospital admissions is a simple, safe and feasible procedure and could greatly benefit physicians in more thorough evaluation of their patients.

MEDICAL MALPRACTICE LITIGATION: ITS SCOPE, CAUSES AND DEFENSES



MERTON E. MARKS

Member, law firm of Shimmel, Hill & Bishop, P.C., Phoenix, Arizona.
Chairman, State Bar Committee on Workmen's Compensation.
Graduate of Northwestern University College of Liberal Arts, (B.S., 1954) and School of Law (J.D., 1956).
Former Assistant Attorney General of Arizona and former attorney for The Industrial Commission of Arizona.
Member, American Bar Association, Section on Insurance, Negligence and Compensation Law.

Although better trained and equipped than at any time in the history of the medical profession, modern American physicians are increasingly sued for malpractice. The purpose of this paper is to explore the magnitude and impact of medical malpractice claims in the United States, some of its causes, some selected areas of such claims, present and future, including defenses which may be asserted, and finally some suggestions regarding avoidance of claims.

The Scope of the Problem

The concept of liability for medical malpractice is ancient but the great tide of claims and suits against physicians is a relatively modern phenomenon. The Code of Hammurabi, the codification of ancient Babylonian law drafted more than 2000 years before the birth of Christ, provided that a clumsy surgeon might lose his hands as the penalty for an operation which maimed a patient. A veterinarian had to repay part of the value of a beast that died through his treatment. However, there were relatively few reported actions for malpractice against physicians before the first half of this century and there has been a tremendous increase since the 1940's.

Some overall statistics will give us a better appreciation of the scope of the problem. There are today approximately 192,597 medical doctors in active practice in the United States. The total premium dollars expended by them for professional liability coverage will approximate ten and one-half million dollars in 1971. Most insurance carriers estimate that one out of every six of these physicians will have a malpractice claim filed against him this year. Those statistics speak for themselves. Physicians are justifiably alarmed and concerned. The frequency of claims has affected their professional insurance premiums and their very approach to patient care.

Where Claims Arise

There was an interesting study which analyzed 1,000 selected malpractice cases during the four year period 1958-1962 and showed the areas of medicine in which malpractice claims predominate.[1] These were:

(1) General problems associated with surgery. These, according to frequency of claims, involved postoperative infection, postoperative hemorrhage, and foreign bodies in that order. With respect to postoperative infection the principal problems were in timeliness of recognition of the infection, adequacy of diagnostic tests, and adequacy of treatment of the infection by the physician.

With respect to postoperative hemorrhage, the principal problem giving rise to claims was undertreatment and this included such things as delay in resorting to the use of whole blood, inadequate replacement of blood, and lack of rapid transfusion in the face of massive hemorrhage.

With respect to foreign bodies, almost half resulted not from leaving foreign bodies, such as sponges, in the body at surgery, but rather from failure to diagnose foreign bodies which had been nonsurgically acquired such as metallic objects which were overlooked in the eye.

(2) General surgical procedures. The most common abdominal operation, appendectomy, led the list with almost half arising from a failure of diagnosis. Several cases involved incidental appendectomies, either performed without consent or followed by complications.

(3) Obstetrics and gynecology. Hysterectomy was the most commonly involved operation giving rise to claims either through infection or hemorrhage. A number of claims arose from allegations of unnecessary surgery. Problems in diagnosis and care of pregnancy were found in a number of cases.

(4) Orthopedics and traumatic surgery. There was no preponderant injury or complications in this area. Problems of treatment outnumbered those of diagnosis four to one.

(5) Administration of drugs. Penicillin was the largest offender. The problems were twofold; the giving of penicillin in the face of a history of previous sensitivity, though unknown to the physician, and the treatment of reactions.

(6) Nonsurgical diseases. Diseases of the heart constituted the largest single category. Diagnostic errors were responsible for a substantial number. Failure to diagnose diabetes was a second significant area of claims.

(7) Cancer treatment. Here rectal, mammary and cervical cancer were most frequently found to be involved. Misdiagnosis was the principal basis for most claims.

(8) Anesthesia. Cardiac arrests constituted the greatest single problem arising from administration of general anesthesia.

(9) Urology, Prostatectomy was the commonly involved procedure giving rise to claims. Although the author's studies revealed adequate technical skill in these surgeries, claims arising out of alleged impotence and incontinence following surgery were the troublesome areas and involved the informed consent doctrine which will be discussed later.

(10) Opthalmology and otorhinolaryngology. Here the principal sources of claims were identification and removal of foreign bodies from the eye and timely recognition of postoperative hemorrhage in tonsilectomy cases, respectively.

(11) Neurology and neurosurgery. Operations on the vertebral column were responsible for many of these claims and these in turn were caused by alleged deficits of individual nerves, widespread postoperative paralysis, and major vascular injury. Failure to make a timely diagnosis of subdural hemorrhage was alleged in a number of cases.

(12) Pathology. The cases here involved mismatched blood in transfusion, complications involving serum hepatitis and misdiagnosis from examination of microscopic slides.

The geographic incidence of claims as reflected by malpractice insurance premiums as of 1968 showed that the highest average medical malpractice premiums (an annual average of $925.00) were paid in California. The lowest average ($115.00) was found in Mississippi. The Arizona average was $610.00.[2] It is well known that these premiums are hitting record highs and causing very serious problems for the carriers and the physicians they insure.

An interim report to the Insurance Commissioner of Pennsylvania, dated January 14, 1971, from an ad hoc committee on medical malpractice insurance in that state showed that five major insurance carriers were engaged in planned withdrawal from the medical malpractice market entirely. This is, of course, occurring in other states as well.

Causes and Effects of Increased Claims

Having discussed the magnitude of the problem let us explore its causes. No person who has any familiarity with the medical profession would suggest for a moment that the gigantic increase in claims results from lack of competence on the part of physicians. Physicians today are as dedicated as they have ever been in the history of their profession and much better trained. While the increased claims are in some degree a reflection of the increased population, there are more profound causes. The more common causes appear to at least include the following:

(1) The problem of patient expectation: Glowing descriptions in the media of supposed wonder drugs and miracle surgery have often been either exaggerated or interpreted as miracle cures. When such results are not obtained some patients immediately blame the physician. Some patients may erroneously believe that a physician can guarantee results. Most physicians correct such mistaken belief. When the expec-

tation of successful treatment fails the patient may seek legal redress.

(2) There has been a change in attitudes toward the physician. In the past there may have been instances in which a patient might have experienced some problem in the course of medical treatment but would not think of suing his doctor. The old family doctor was a family friend and confidante. Chances are that he was a general practitioner and so the patient had occasion to see him for many different problems. But times have changed. The traditional image of the family doctor is vanishing from the American scene. Medical practice is becoming more impersonal largely because of specialization. In 1931 85% of all physicians were general practitioners. Today only 25% are. The doctor is viewed as part of the business community as a whole rather than as the family friend. With the changing relationship the reluctance to sue the doctor has vanished.

(3) The legal profession must share responsibility for the problem. For years the automobile case has been the mainstay of personal injury practice. Profound changes are on the horizon in the auto reparations system. Other types of actions have therefore become more common. Suits against physicians are only one segment of a general trend which will see an upsurge in products liability cases and malpractice suits against lawyers, architects, accountants, brokers and engineers.

(4) The physician shortage has resulted in undue pressure upon physicians who try to do more for more patients but have less time in which to do it. More and more the physician turns to nurses and paramedical help to perform services which once lay in his exclusive domain. This has also resulted in increased impersonalization of medical practice and a weakening of the strong physician-patient relationship which once existed.

(5) The trend of court decisions has been a tremendous factor in encouraging the filing of claims. Although many malpractice claims are successfully defended, the trend of coure decisions in the negligence field favors claimants. This is part of an overall increasingly liberal trend of extending liability in all types of personal injury cases.

We have now discussed some of the causes; what about the effects? They are subtle, many and varied. For example, in 1957 a $250,000 jury verdict was rendered in a suit against a physician and hospital in California resulting from total and permanent paralysis from the chest down following the performance of a delicate diagnostic procedure of considerable but recognized risk.[3] While the case was reversed on appeal and later settled after the death of the patient, certainly the impact of this case was to deter many specialists from employing such sophisticated techniques. Word of adverse court decisions in malpractice cases spreads quickly in the medical community. In the face of such decisions one can hardly blame a physician who becomes lawsuit conscious and decides just to treat the patient conservatively. The physician is now faced with a dilemma: to treat the patient conservatively may invite a suit for undertreatment or failure to take appropriate remedial action. To attempt heroic means of improving the quality of life may invite a horrendous lawsuit if something goes wrong.

A second effect on the medical profession is to make the physician so litigation conscious that in order to protect himself he employs all sorts of diagnostic tests (at the patient's expense) which he would not otherwise employ in order to build a record in case a lawsuit is brought.

Common Areas of Litigation and Defenses

Having discussed some of the causes and effects let us now turn our attention to some of the common areas of litigation and the defenses which may be available as well as some of the more unique and novel areas which are just beginning to develop.

At the outset let us define the standard of care to which the physician is bound. As stated by the Arizona Supreme Court:

> "One licensed to practice medicine is presumed to possess the degree of skill and learning which is possessed by the average member of the medical profession in good standing in the community in which he practices, and to apply that skill and learning with ordinary and reasonable care, to cases which come to him for treatment. If he does not possess the requisite skill and learning, or if he does not apply it, he is guilty of malpractice."[4]

Bear in mind that malpractice does not occur where there is a mere error of judgment, as opposed to a departure from the local standard of care. Nor is the physician a guarantor of results.[5]

The first act which the physician is usually called upon to perform with respect to the

patient is diagnosis. Many cases have involved alleged negligent misdiagnosis. However, a defense may exist if the patient exhibited a variety of symptoms which are consistent with a number of different conditions. In a 1944 California case[6] a 12-year old boy, brought to the physician with complaint of stomach pains was diagnosed as having ptomaine poisoning when the physician was given a history that the child had eaten some spoiled balogna on the previous day. Nine days later when the child's condition had obviously deteriorated, the child was referred to a surgeon who diagnosed appendicitis and operated but the child had already contracted fatal peritonitis. The physicians were exonerated from the charge of improper diagnosis in view of the patient's history coupled with the initial symptoms.

In laying the foundation for the assertion of this defense to a charge of negligent misdiagnosis it is therefore important to carefully analyze each and every subjective symptom and objective finding at the initial examination.

Following the diagnosis the physician must embark on the course of treatment. This is usually where the problem of informed consent may arise. The doctrine of informed consent states that a physician has a duty to warn a patient of the possible complications or expected results of treatment or the hazards of new or unusual therapy. As the chance of risk increases the duty to inform increases correspondingly. If the patient does not understand the explanation then any consent which he gives will probably be held to be legally invalid. However, full disclosure of all of the alarming possibilities might destroy the patient's peace of mind when he needs it most or cause him to decline the suggested therapy.

Consider for a moment the legal implications of the dilemma in which the physician may find himself. The Arizona Court of Appeals has said that an informed consent is effectual if the patient understands substantially the nature of the contemplated procedure and its probable results.[7]

In a New York case[8] the radiologist who was administering x-ray treatments did exactly what the Arizona Court of Appeals has said must be done. He warned the patient of reasonable and recognized risks by telling her to have her shoulder checked every six months because the chronic radiodermatitis caused by the x-ray treatments might become cancerous. She developed cancerophobia, sued the doctor for causing her neurosis, and recovered a large verdict.

Some of the pitfalls in the informed consent area are these:

If the patient is a child or mental incompetent, disclosure must be made to the person in charge of the patient.

The physician must be wary of the patient's intellectual capacity and explanations must be given in such a way that the patient understands them. Illustrative is a 1955 Nevada case in which the patient signed a consent for a mastectomy but did not understand that this meant removal of her breast.[9]

Likewise the patient has the right to decide for himself which course of action he prefers where there are alternate treatments. The failure to explain an alternative, if one exists, may be construed as negligence.[10]

What are some of the defenses which may be asserted when a charge is made that the patient did not give an informed consent?

The emergency situation is an exception. For example, where the patient had just been bitten by a venomous snake the physician was not required to discuss various available methods of treating snakebite and the possible consequences.[11]

Another defense is that the plaintiff must show that he would not have had the operation or allowed the procedure if he had known what the foreseeable consequences would be. If, as occurred in an Arizona case[12] the patient admits that he would have gone ahead with the procedure anyway, he cannot recover.

Although cases suggest that the physician does not have to offer explanations beyond that which he thinks it is safe for the patient to know as dictated by the patient's emotional state, the physician acts at his peril in not making a full disclosure of inherent risks.[13]

Another defense which can be asserted is that of unexpected risks: Obviously the patient need be informed only as to those risks which are reasonably foreseeable. The physician will not be responsible for a risk which is not reasonably foreseeable and not inherent in the procedure.[14]

A very recent California case[15] held that the patient could not claim lack of informed consent where she preferred to remain ignorant of the risks and so advised her physician.

Another source of malpractice claims involves

the physician's duty to refer a patient to a medical specialist. It is clear that under certain circumstances liability can be predicated on a failure to do so. When this charge is made, however, there are certain defenses which can be asserted.

One defense is that before liability may be imposed it must be shown that the physician knew or should have known that the condition which confronted him was beyond his ability, knowledge or capacity to treat.[16]

Also, if the physician feels that referral would not benefit the patient he is under no duty to refer.[17] Referral of the patient's care to others, however, opens another Pandora's box; that of vicarious liability, that is, liability which is imputed to the physician through the acts of others.

A physcian is legally responsible for the negligent acts of his partners and employees, such as his nurses or assistants. The problem, however, may not stop there. In a 1935 Oregon case[18] a physician was held liable for the malpractice of a substitute who took care of his patients while he was on vacation, where the financial arangement between the doctors showed that the substitute was an employee rather than an indepndent contractor of the original physician.

There are, to be sure, cases which even hold the surgeon liable for the acts of hospital employees in the operating room under his immediate supervision and control on the theory that assisting physicians and nurses, though employed by the hospital or the patient, become the temporary agents of the surgeon in charge while the operation is in progress.[19]

Since medical malpractice cases rest usually on the theory of negligence, the usual defenses of contributory negligence and assumption of risk can be asserted where applicable. If there has been truly informed consent then the patient has assumed the risk of the consequences of treatment.

The defense of contributory negligence may be asserted in various circumstances, such as the patient's failure to return to the physician for follow-up treatment[20] or to have certain services performed[21] or failure to call the physician where new symptoms develop even if the physician did not issue specific instructions to do so.[22]

Defenses may also exist where the patient failed to have prescriptions filled and to take proper dosages[23] or where he engaged in unusual activity involving a fractured limb still in a cast[24] or where the patient did not follow the physician's instructions for follow-up care at home.[25]

Although the Statute of Limitations may be a defense, the Arizona Court of Appeals has recently ruled that the two year Statute of Limitations for malpractice actions begins to run when the patient **discovers** the alleged act of negligence rather than on the date of the act.[26]

Superimposed on all malpractice claims is the question of what is the standard of care as established by the medical profession in the **locality of practice** since negligence is defined as a departure from that standard and expert medical testimony is normally required in a malpractice case to establish the standard of care.

There is a developing trend to attempt to do away with the locality rule and judge the physician's acts by a national standard. This ignores the practical reality that medicine is necessarily practiced differently in a rural community than in a highly sophisticated hospital in a large city. Expert defense testimony should therefore be drawn from physicians in the community where the defendant physician practices. In Arizona the courts have repeatedly held that the standard of care is that of the community in which the physician practices. A recent appellate decision, which our Supreme Court declined to review,[27] not only refused to apply a national standard but even refused to extend the standard to "The same **or similar localities.**"

With the growing complexity of modern life we can be sure that there will be more and larger claims in new areas of medical practice.

There are more drug companies turning out more drugs than ever before in history. Physicians are deluged with samples and encouraged to administer them to patients. However, a physician who administers or prescribes a drug may be liable for a harmful reaction. Failure to exercise reasonable care to determine the effects of a prescribed drug has been held to be negligence.[28] Likewise a physician is under the duty to warn of side effects which may occur while the patient is taking the drug and he may be liable for the chain of events which may follow administration of an incorrect drug such as in a case where adrenalin was mistakenly administered but followed by injection of a counteracting drug which caused drowsiness. The physician was held liable for the patient's resulting fall.[29]

With the emphasis on youth and sex we can

be sure that cosmetic surgery will produce its share of malpractice litigation. Typical was a case tried in the Supreme Court in Manhattan, New York, several years ago involving a 37-year old Venezuclan woman who wanted her breasts raised and underwent injection of silicone into her breasts. This ultimately resulted in the loss of both breasts and in a subsequent malpractice suit against the plastic surgeon the jury awarded her $150,000. The trial judge in ruling that the verdict was not excessive noted that "Well shaped breasts" are vital in a woman's search for a husband, "she is single, and it would be rather difficult for her to find a life companion under the present circumstances."

Another area which is sure to produce litigation in time is that of organ transplants. With respect to heart transplants a number of writers have explored the question of when death occurs for purposes of taking the organ from the donor. At least one action arising from a heart transplant has already been filed. A 4.75 million dollar damage suit was filed on April 16, 1971 in Houston, Texas, against Dr. Denton A. Cooley by the widow of a patient on whom Dr. Cooley performed a heart transplant following use of a mechanical heart. The suit alleges that the mechanical heart was in an experimental stage and had not been adequately tested.[30]

With the current emphasis on birth control there have arisen malpractice cases relating to the liability of physicians arising out of pregnancies following unsuccessful vasectomies, female sterilizations, and the prescription of birth control pills. While most cases have taken the position that the normal birth of a normal child does not confer a cause of action against the physician[31] California has taken an opposite view.[32]

Alternatives to Malpractice Actions

Having discussed the scope of the problem and some of its causes and effects, what are some of the possible long range solutions to the problem?

In the public sphere continued attention should be given to the enactment of legislation which will minimize professional liability suits. For example, Arizona has a "Good Samaritan" statute[33] which exempts a physician from liability for conditions arising out of the rendition of emergency treatment except in cases of gross negligence.

Another area worthy of consideration is arbitration. While arbitration, to be sure, has disadvantages, its principal advantages are the avoidance of publicity, encouragement of settlements, speedy disposition of claims, and reduction of litigation expenses to some extent.

Another approach which has been used in both Tucson and Phoenix, Arizona, and with which all physicians should be familiar, is the panel screening system for presuit consideration of potential claims (known as the Pima Plan). The panel has jurisdiction over all cases involving any alleged act of medical malpractice in the county except cases resting on contract theories, involving intentional acts, or res ipsa cases where expert testimony is not required to make a prima facie case.

Upon receipt of a letter of complaint the chairman advises the claimant of the time and place of hearing and furnishes the claimant with the names of three medical specialists in the field which pertains to the claim. The claimant may select any one of the three physicians and discuss the case with him without compensation. The duty of cooperation of such consulting physician, however, exists only with respect to hearings before the panel. The respective chairmen of the panel may designate an expert witness of their choice to testify at the hearing.

The respondent doctor is notified of the pendency of the claim and is given 20 days to answer the charges. Expert witnesses may be summoned for the hearing. Members of the panel may be challenged for cause subject to the ruling of the medical and legal chairman. A prehearing conference is recommended.

At the hearing the parties may present their evidence and examine witnesses. The panel is not bound by the technical rules of evidence. When the necessary information has been obtained a first vote is taken by secret ballot on the question "IS THERE ANY SUBSTANTIAL EVIDENCE OF MALPRACTICE?" If a majority of the members vote in the negative the matter is closed and the parties are so advised. If a majority of the members vote in the affirmative, then a further secret ballot is taken on the question "DO THE FACTS TEND TO SHOW REASONABLE MEDICAL PROBABILITY THAT THE CLAIMANT WAS INJURED THEREBY?"

The panel makes no effort to resolve the disputed questions of fact. Its only function is to determine whether in its judgment there is any

substantial evidence to support the allegations of the claimant.

If the questions are answered in the affirmative, the medical panel will cooperate fully with the claimant in retaining physicians qualified in the field of medicine involved who will consult with and testify on behalf of the claimant at any subsequent trial.

If the questions are answered in the negative, the attorney bringing the matter for review "Shall thereafter refrain from filing any court action based upon it unless personally satisfied that strong and overriding reasons compel such action to be taken in the interest of his client, and that it is not done to harass or gain unfair advantage in negotiation for settlement."

Some Suggestions for the Avoidance of Claims

Obviously claims against physicians will continue to be made. There are, however, lessons to be learned from the decisions in malpractice cases and there are basic practical precautions which should be taken by the physician to minimize potential claims.

Precise record keeping is imperative. Consent forms should be used as part of any substantial medical procedure. To assure proof of "informed consent" the consent should contain an acknowledgement that the patient has been given an explanation of the procedure, the risks involved, the probable results and any alternate procedures which might exist. The American Medical Association has recommended that a physician's records should show the medical basis for every procedure recommended or performed.

Office personnel should not be permitted to give medical advice to patients either in person or over the telephone. Nurses and office assistants should be instructed to report patients' calls promptly to the physician. Drugs should not be routinely prescribed nor diagnoses routinely rendered over the telephone without examination of the patient. In conversing with the patient the physician should be sensitive to detect patient discontent with treatment or an attitude indicative of a patient's belief that a physician can guarantee a cure and the patient should then be advised as to the realities of medical treatment.

Where serious procedures are contemplated the patient's spouse should be present when the prospective procedure is outlined and explained by the physician.

When drugs or home therapy are prescribed, the patient should be encouraged to call the physician's office in the initial stages to report progress and possible reactions and a record should be made of all such incoming reports.

Personal disputes over fees between physician and patient should be avoided as any confrontation which deteriorates the physician-patient relationship is a fertile breeding ground for malpractice claims.

If a claim or suit for malpractice is filed against a physician, immediate notice should be given to the malpractice insurance carrier and discussions of the claim should not thereafter be had by the physician with any individual except representatives or attorneys of the insurance carrier, the physician's personal attorney, or others specifically designated by them.

Obviously it is not possible to compile any list of do's and don'ts which will be sufficiently all inclusive to completely avoid a claim. The foregoing suggestions, and the lessons of the various decisions involving professional liability of physicians should, however, provide a basic framework for the prudent physician in his day to day practice.

This article was adapted by the author from a talk which he presented at the 1971 convention of the New Mexico Claim Men's Association.

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18. Moulton v. Huckleberry, (Ore.) 46 P2d 589.
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22. Lemon v. Kossel (Iowa) 209 NW 393.
23. Gerber v. Day, (Cal.) 6 P2d 535.
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26. Mayer v. Good Samaritan Hospital, (Ariz. App.) 482 P2d 497.
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29. Schulz v. Feigal, (Minn.) 142 NW 2d 84. See also Whitfield v. Daniel Const. Co. (S.C.) 83 SE 2d 460.
30. According to an article in the El Paso Herald-Post, April 17, 1971.
31. Ball v. Mudge. (Wash.) 391 P2d 201.
32. Custudio v. Bauer, (Cal. App.) 59 Cal. Rptr. 463.
33. ARS 32-1471.



CALORIES / 7 oz. Serving*

Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

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HEALTH MAINTENANCE ORGANIZATIONS

The Health Maintenance Organization, the so-called HMO, is a keystone to the Nixon Administration's health care proposal. Without actual laws and regulations, any definition of such organizations must be tentative. However, House and Senate versions of HR 17550 and the current HRI and HR 5615 contain definitions which vary only in details. Thus, a HMO is a public or private corporation which meets the following conditions:

1) Provision of health services to enrollees either directly or through arrangements with others on a capita pre-payment basis;
2) Provides enrollees with all services covered by Medicare Parts A and B, or with all services reasonably required by a defined population to be maintained in good health with a minimum of emergency care, inpatient hospital and physician care, ambulatory physician care, and outpatient preventive medical services;
3) Provides physicians' s e r v i c e s directly through physicians who are HMO partners or employees, or through arrangements with an organized group of physicians paid on an aggregate fixed sum or per capita basis, or through arrangements with one or more groups of physicians (organized on a group or individual practice basis) and many other features.

The draft plan does specifically list Foundations for Medical Care of the type sponsored by medical societies as potential HMO sponsors. Two complex relationships are apparently necessary for HMO's: (1) a definite contractual relationship between a Foundation (or a prepaid group), and a hospital or hospitals initiated either by the professional group or the hospital (AMA's Division of Medical Practice publication on HMO's of May, 1971) and (2) the HMO must be reviewed and commented upon by the Comprehensive Planning agency serving the area (Vernon Wilson, M.D., the federal official who will be in direct charge of the HMO plan interview in AMA News, June 21, 1971).

Social Security Commissioner, Robert Ball, has correctly commented that "no health care system will work well that is not reasonably satisfactory to the key profession in that system. Physicians must be attracted to Health Maintenance Organizations, and they must feel good about what they are doing."

The American Medical Association supports a pluralistic system for the delivery of health care and the right of both patient and physician to choose the system within which they encounter each other as long as that system exploits neither patient nor physician. In regard to the proposed Medicare-HMO changes, the Association has simply recommended that HMO's be thoroughly tested before being incorporated in the program, that the individual application of the concept be judged on its merits in each instance, and that the control over the provision of medical service be by medical organizations.

Your Editor believes (at this time) that the Nixon Administration's HMO plan has merits, some hazards, and that mutually satisfactory agreement between the medical society Foundations for Medical Care, the AMA and the Administration should be negotiated as rapidly as possible.

John R. Green, M.D.
Editor

Editor's Page

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President's Page

PRESIDENT NIXON'S SPEECH



Speaking at the recent annual convention of the American Medical Association, President Nixon challenged our profession to assume leadership in four areas of vital interest to our citizens and the health and well-being of our society. These areas were (1) improvement of the nation's health care system, (2) involvement in educating people to the serious dangers of drug abuse, (3) to contribute to the physical, moral and mental health of the country, and (4) become more actively involved in politics at all levels of government.

President Nixon advocated the administration's national health care proposals and requested our support for such legislation. He pointed out the many deficiencies of the proposed Kennedy health care program but did not mention the AMA proposal "Medicredit."

President Nixon's appearance before the AMA membership in Atlantic City, and Senator Kennedy's "hearings" on health care are just more indications that health care legislation has and will be the most vigorously discussed domestic political issue.

At its session our state legislature considered much health care legislation. Next year the amount of health care proposals will surely increase.

Our Congress has received and is studying at least eight major bills relating to national health insurance, and numerous minor proposals relating to the same issue.

We do have health care problems that are important and urgent. It is to be hoped that national and state legislators will not be stampeded into hasty and expedient action but have the courage and integrity to adopt a health care program that will do the job in an efficient and waste free manner. Spending large amounts of money on a program that has great vote-getting potential but doesn't meet the actual needs of the ill, injured and the deformed doesn't make sense — but it has happened before.

As individuals, and as an organization, we must participate more fully in developing health care legislation. By our training, education and our daily involvement with the lives and health of people, we are qualified to be of valuable assistance in formulating change in our health care system. To implement our ideas we must fully participate in the legislative process. Failure to do so only plays into the hands of those persons who would destroy the private practice of medicine.

James L. Grobe, M.D.
President

Dean's Page

THE COMMUNITY HEALTH MEDIC PHYSICIAN-ASSISTANT TRAINING PROGRAM

The Physician-Assistant concept is experiencing increasing acceptance throughout the country, both by the profession and the community. A number of medical schools are now training ex-medical corpsmen, nurses and other allied health personnel to assume major responsibilities for the delivery of primary health care. Among the most interesting, and most challenging, of these training programs is the Community Health Medic (CHM) program of the Indian Health Service in which the College of Medicine is participating. Two such programs now exist, one in the Phoenix-Tucson area and another in the Navajo Reservation in northeast Arizona. Thirty trainees are currently enrolled in these two-year programs. The Departments of Family and Comunity Medicine, Pediatrics and Psychiatry have been providing these programs with advice on curriculum development and instruction in clinical skills.

Like other Physician-Assistant programs, the CHM program is designed to train able, well-motivated men and women with a background in medicine to provide many of the services now offered by over-worked physicians – or, in many areas, by no one at all. The graduate CHM will be able to gather accurate medical and social data by interview, physical examination and basic laboratory procedures, diagnose and treat common ailments and expedite care for serious conditions requiring specialized services and facilities.

Unlike other programs, the CHM will be intimately involved with his community on a round-the-clock basis. The trainees, all of whom are Indians with health-care experience, were selected partly on the basis of their desire and willingness to live on the reservation, often in isolated areas with no medical facilities. The importance of this community involvement cannot be overestimated, for many of the health problems that plague the Indians stem from cultural beliefs and practices which were appropriate to Indian life in decades past but which are now a liability in the conditions under which Indians must live. The CHM, as an Indian, may be able to bridge the gap between the Indian way of life and modern health practices, and do so in a way which will preserve basic Indian culture and mores.

The CHM training program will be coupled to another Indian Health Service Program, the Health Programs Systems Center, located at San Xavier just outside of Tucson. This group is the research branch of the Indian Health Service and is exploring various innovative approaches to the delivery of comprehensive health care. Already operational is a computer-based medical record system for the entire Papago tribe which makes complete medical information on any patient available within a few seconds. Other projects include the development of a simulation model for outpatient clinic operation, a variety of epidemiological and demographic studies and cost-benefit analysis of health services. This research will furnish a firm operational basis for maximizing the CHM's effectiveness in the delivery of preventive and curative health services.

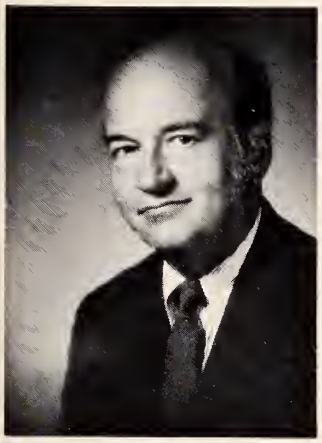
Essential to the success of the CHM program is a modern communication system to provide advice and assistance for difficult problems. Rapid transportation for remote areas by helicopter is already available in some sections of the state. A space-age communication system including voice, data and even video capabilities offers exciting possibilities for extending the range of CHM services and is currently under consideration. All of these activities can bring truly comprehensive care to the American Indian.

Helping upgrade the quality of Indian health is reason enough to make our participation in this program worthwhile but there are other benefits as well. We must devise teaching techniques appropriate to the CHM's backgrounds and needs. Such innovation often leads to valuable reappraisal of traditional learning activities. Development of the CHM curriculum may have implications for new curricula being designed for other programs in primary care. And the development of a really effective health care delivery system for the Indians might provide valuable guidance for solving some of the problems of rural health care throughout Arizona.

Jack Layton

Topics Of Current Medical Interest

THE WORDS OF THREE PRESIDENTS



DANIEL T. CLOUD, M.D.
Delegate to the AMA

The most notable happening of the 120th Annual Convention of the AMA that met in Atlantic City in June was a major address given by the President of the United States to the House of Delegates.

It was on the morning of the third day of the meeting, the day after a long, exhausting gallimaufry of reference committee debate, and the morning after a humid night of political bargaining and persuading — for the House of Delegates was coming up to its own bustling election. When Mr. Nixon entered the huge banquet room where his audience had been waiting for nearly an hour in the cocoon-like security that circumfused the Chalfonte-Haddon, he was vigorous, tan, healthy looking, and obviously delighted with the chance to speak to people whom he knew from earlier experience would respond warmly to his words.

And speak he did, much like he spoke to the same House in Chicago in 1966 when he was on the early campaign trail, relaxed yet forceful, persuasive and perceptive, and talismanic.

"As we look at the current picture of health care in this country," he said, "we see many opportunities for doing more . . . a need to place more emphasis on primary care, on preventive medicine, on outpatient treatment . . . we simply cannot *buy* our way to better medicine . . . nationalized health insurance (the Kennedy proposal) would exact a very high price from our people in terms of dollars and cents . . . an even higher price in terms of the quality of American medicine . . . would eventually lead to complete Federal domination of our medical system . . . America's health care system needs reform . . . but we can never improve our country's medical system by working against our country's medical profession . . . let us work together for a system that will continue to provide for choice . . . for quality . . . and deal with the pressing problems of costs."

He spoke urgently of drug abuse, clearly the central issue of the address and predictably one for the election next year. "This problem is so serious that I feel the President must take personal command and responsibility," he said. "I ask your help . . . no one can have more effect . . . than a doctor on this issue of drug abuse . . . I note that in Arizona the Maricopa County Medical Society has pulled together an impressive drug control program for Phoenix . . . the AMA can once again render outstanding service . . . by helping to develop what I would like to call *Project USA* . . . an all-out battle against drug abuse."

(The magnificent plug for Codac, along with having Monty DuVal appear on the platform with President Nixon, generated a few sweet moments of pleasing notoriety for your Arizona delegation.)

In closing Mr. Nixon included an impromptu remark that drew the loudest applause of the morning and perhaps carried as much sinew as anything he said. He was talking about the need for doctors to use their leadership ability, to become involved in national affairs, and about how he had heard a doctor say that he was only interested in his profession, not politics. "Let me tell you something," the President thundered.

"He had better get interested in politics or he won't have any profession to be interested in!"

In short, President Nixon urged us to become involved as leaders in improving America's health care system, in fighting drug abuse, and in shaping national affairs. It seems imperative that we meet these great challenges if our profession is to keep secure the most vital timbers of its framework.

In the opening session of the House of Delegates, Dr. Walter C. Bornemeier, finishing his year as President of the AMA, gave his final address: "Blueprint for the Future." Dr. Bornemeier, a wiry, scholarly looking Chicago surgeon with a quick smile and a sincere demeanor, has long been intensely concerned about the availability of health care.

"Availability is on the front burner," he said. "Geographic availability is paramount . . . specialization (has) removed doctors from many neighborhoods . . . the demand for medical care has outstripped the ability of the medical profession to produce . . . the increase in production of physicians has not kept pace with the need . . . medical care must be moved to the ambulatory centers . . . practicing physicians are moving toward group practice . . . there is a ground swell . . . the people of the country want group practice."

But this was Dr. Bornemeier's most provocative comment: "It is my firm conviction that if we bring comprehensive medical care back into the population centers, the neighborhoods, and have medical care available twenty-four hours a day, seven days a week, the people will tell Congress that the present system does not need to be restructured."

On the last evening of the convention, Dr. Wesley Hall, a neighbor from Reno, Nevada, was inaugurated as the AMA's 126th President.

A new president's first task is, of course, to deliver an inaugural address in which he generally summarizes the state of medical affairs in the country, and he usually tries, with varied success in past years, to identify some new pet issue of his own that will electrify American Medicine and spark a little action. Dr. Bornefeier scored pretty well in this department a year ago when he proposed some radical changes in physician training that brought scathing backlash from many specialty groups that disagreed. He sparked some action all right, and you wondered what fresh idea could possibly be thought up by the next man.

Dr. Hall, plainly a Westerner even in his dinner jacket and black tie, found the main nerve with these sweeping recommendations: ". . . the AMA needs a Constitutional Convetion," he rumbled, and the audience rustled. ". . . to streamline our governing process to suit the needs and pace of the twentieth century physician and people . . . one additional meeting day (in our business meetings) . . . combine some of our 100-plus councils, commissions, and committees . . . set a limit upon the number of terms delegates can serve in this House . . . rescind outdated resolutions . . . update present policies . . . create a separate Section on House Officers . . . have a representative in this House of Delegates from our Student AMA . . . ask our ladies (the Auxiliary) to augment educational programs for prenatal care, and to help combat teen-age drug abuse . . ."

The proposal to have a Constitutional Convention to streamline the AMA was an absolute surprise to the audience. Evidently Dr. Hall had neither consulted nor informed the Board of Trustees of the idea, which does have some complicated ramifications, and the Board was nettled. They hastily met and framed a recommendation that would have had the House immediately reject Dr. Hall's proposal.

The next morning, just before final adjournment when everyone had brain exhaustion, an extraordinary gaffe almost occurred. The Board's recommendation to reject the Constitutional Convention came up, and for awhile it looked as if it might slip through. But after some pithy debate, the House carried a motion to refer the matter for further study.

If the Board's recommendation to reject had passed, it would have signalled the sharpest possible repudiation of the new AMA president, less than twenty-four hours after his inauguration. How might that have lacerated the image of AMA unity?

These then were some of the words of the three presidents who spoke to us in June — some new ideas to ponder, some old ideas freshly struck: Fix the national health care system, fight drug abuse, get involved in national affairs, make health care more available, streamline the AMA. They are probably the most important issues that have ever challenged American Medicine.

REMARKS OF THE PRESIDENT BEFORE THE HOUSE OF DELEGATES AMERICAN MEDICAL ASSOCIATION

Pennsylvania Room
Chalfonte-Haddon Hall Hotel
Atlantic City, New Jersey
June 22, 1971

Dr. Bornemeier, all of the distinguished guests on the platform and all of the distinguished delegates to this convention:

I very much appreciated that reference by Dr. Bornemeier to the year 1966. Let me say he had a lot more confidence in my future than I had, I can assure you. I recall, too, the pleasure that I have had in addressing the AMA on another occasion in Atlantic City in 1951. Some of you will be old enough to remember that. I was then just a Senator. So this makes the third time that I have had the privilege to address this organization in their session.

I have also done a little checking with regard to when Presidents — at least that means Presidents of the United States — I understand all of these front rows are either presidents or past presidents of AMA — in checking the record I find that as far as Presidents of the United States are concerned, in the 120 years of this organization only four have had the privilege of addressing you. The last time was President Eisenhower in 1959. I am honored to be here as President, after having had the opportunity to address you as a Senator, as a former Vice President, and now as the Chief Executive of the Nation.

It is very important that a President of the United States speak to this organization. The Presidents of the United States should, it seems to me, find more opportunities, perhaps, than four in 120 years to come before this organization for reasons that I will cover in my remarks today, because this is a very important organization.

I am referring to matters going far beyond the special competence, the technical competence, represented in such degree in this room. For example, just yesterday, as some of you may have noted in the press, my wife and I celebrated our 31st wedding anniversary. It was a very inexpensive celebration. Normally we go out on such occasions. In this case we stayed in and watched television and watched a re-run of our daughter's wedding at the White House.

On that occasion, as I was thinking of that 31st wedding anniversary and putting together my remarks for today, I was reminded of a story which is probably very old to an organization of doctors, about a doctor who is celebrating one of his wedding anniversaries. He is trying to get out of the house for his weekly bridge game. He told his wife that he just had a call from a patient and he would have to leave. She said, "But, dear, is it serious? Is it important?" And he said, "Oh, it is very serious and very important. There are three doctors there already." (Laughter)

What that, of course, brings home to us is when you have any gathering of doctors, it is a very serious occasion and a very important occasion. So this gathering of thousands of doctors from all over America is important. It is important for reasons that I think, perhaps, we can find as we study the history of America and even further back than that.

Disraeli once said that "the health of the people is really the foundation upon which all their happiness and all their powers as a state depend."

That profound statement is one that we should

consider today, and we should think of health in a much broader context than simply the physical health to which you have devoted your lives. I am happy for this opportunity to salute this profession which has contributed so much to the health of the American people and to the strength of this Nation.

America is a strong country. It is a good country. And one of the reasons it is a strong and a good country is because it is a healthy country, and we appreciate what you have done to make it a healthy country.

You should take pride in those accomplishments — all Americans should. For we can never hope to repair any weaknesses that may exist in American medicine unless we fully appreciate its towering strengths.

One of the strengths of American medicine has always been that it has had a restless and inquiring spirit. All of you are aware of this. This spirit was summed up in a statement which the distinguished physician Charles Mayo made years ago about his equally distinguished brother, Will. He was "filled," said Charles, "with the genius of finding opportunities." The same point was made more recently by Dr. Jonas Salk when he said: "The greatest reward for doing is the opportunity to do more."

As we look at the current picture of health care in this country, we see many opportunities "for doing more." Those opportunities have been recognized by this organization. You have spoken to them in your resolutions. You will be considering them in your meetings at this convention. Among them — the opportunities for doing more, problems to provide opportunities and their solutions — are these: There are too few doctors in some areas as you know, too many in others. We see a growing need for more health personnel, more efficient training. We have too many doctors spending too much time on routine tasks that others could help them with.

We recognize the growing menace of malpractice suits which force every doctor to look upon his patients as potential plaintiffs. As we look at American medicine we also see a need to place more emphasis on primary care, on preventive medicine, on outpatient treatment. And we see that despite our considerable progress in this area, in the field of voluntary health insurance, financial considerations still deny quality care to many Americans, while the dark threat of catastrophic costs still imperils most of our people. These are challenges. These are challenges that we can be grateful that our country now has entered into a period of productive discussion about the best way of meeting.

I say to this organization that I am sure many of you are concerned about what may come in the future in the reform of health care systems. But I say welcome this debate. You should join it. We need you to join it. We need your assistance in it. It will be a great debate. It will be a strong one. It will be one that will command the attention of the country in the weeks and months and perhaps for years ahead.

I noted with interest that your new president, Dr. Hall, for several years has been the Boxing and Wrestling Commissioner of the State of Nevada. Well, you need a Boxing and Wrestling Commissioner in this debate that is coming in, I can assure you. For out of this time of discussion and decision will surely come a whole new era in the history of American health care.

Last February, I offered my own contributions to this discussion, a wide range of proposals that I have discussed with some of your leaders. These proposals are designed to balance growing demand for care with a growing supply of services. They are founded on the principle that we cannot simply buy our way to better medicine.

It is very easy sometimes to think that the plan that costs the most will help the most, but often the situation is just the opposite. In fact, I believe that the most expensive plan that has been offered in the current discussion on health care in America — a plan for nationalized compulsory health insurance — is the plan that would actually do the most to hurt American health care in this Nation.

This is not a new position for me. I made the same general statement in my speech in 1951 to this organization and in 1966. Let me give you the reasons why I have reached this conviction. The conviction is strongly held, as I am sure is the conviction held by those who advocate this plan.

First of all, if this plan went into operation, by fiscal year 1974 it would cost the Federal Government over $77 billion. Let's bring it down to matters that all of us can better understand. It would drive the health share of the Federal budget to nearly 25 percent. In other words, 25 percent of the total Federal budget would be going for health care. And that would mean that we would be limiting our ability for hand-

ling other social problems.

Our present Federal health programs, if continued, would cost the average family in America an estimated $405 per year by 1974. My plan would increase that cost, but increase it only to $466 per year. Under the nationalized compulsory health insurance program, the average household's, the average family's, American Federal tax bill for health programs alone would be tripled to $1,271 a year.

Nationalized health insurance would exact a very high price from our people in terms of dollars and cents. These figures demonstrate that point. But, in my opinion, it would exact an even higher price, a price in terms of the quality of American medicine. On that score, let me just speak as a layman. When I am sick, I want to be able to get a doctor. But above everything else, I want a doctor who is a good doctor. I am interested in quality as well as the ability to provide for a doctor.

When the Government pays all the bills for health care, then the Government becomes the only party with a strong interest in restraining costs. This inevitably means that Government officials would have to approve hospital budgets. They would have to set fee schedules. They would have to take other steps that would eventually lead to the complete Federal domination of our medical system. That is the road that some advocate. I think it is the wrong road.

Rather than freeing the doctor so that he can do more to help his patients, nationalized health insurance would burden him with the dead weight of more bureaucracy, more forms, more red tape. I know what kind of forms and red tape many of you have to fill out now.

Just let me again speak as a layman. When I go to a doctor, when I am sick, I want him to worry about me and not to be worrying about some form he has to fill out for the Government.

Rather than expanding the range of choice for doctors and patients, it would severely narrow that range. Rather than encouraging more responsibility at the local level, it would concentrate more responsibility in Washington. Rather than stimulating competition and diversity it would dull the incentive to experiment and innovate.

The Administration's Health Insurance Partnership would build on the strengths of the present health care system. Nationalized health insurance would tear that system apart.

America's health care system needs reform. You have recognized that. But we can never improve our country's medical system by working against our country's medical profession. Other nations that have gone down this road have found this out. No system of health care will ever work unless the doctors of the Nation make it work. We need your help to make it work and to develop it. So let us work together for a system — a system that will continue to provide for choice, that will continue to provide for quality, and one that will at the same time deal with the pressing problems of costs in an effective way that will not destroy quality, a problem which all of us are deeply aware of.

I would like to talk to you today about another subject, a challenge in the health care field related to it very directly, a problem which I note again you are taking up in your general sessions; in fact, this afternoon.

I refer to the problem of drug abuse. Drug abuse, I have said recently, is America's public enemy number one. It is the greatest of all present threats to our social future. We used to brush it off. We used to say it is a ghetto problem or it is a black problem, or it is a problem of the poor and the depressed and the wretched.

But today it is no longer just a ghetto problem. It is no longer just a problem that primarily affects those that are nonwhite or the poor, because its impact cuts across all social and economic lines in our country.

It has moved from the ghettoes to the suburbs, from the poor to the upper middle class, and the upper class in terms of economic income. It afflicts the rich and the poor, the blacks and the white, the servicemen and the civilians, and the ghettoes and the suburbs. It spreads like a plague throughout our society. It erodes our Nation's strength. It destroys our Nation's spirit. And, worst of all, it undermines our Nation's future.

I had a letter recently from a man who said that we are in danger of losing "a whole generation of Americans to drugs."

Two years ago I recommended a series of new laws to crack down on drug abuse, particularly in the enforcement field. Those laws passed the Congress last fall and they are beginning to prove their value. But more is needed, particularly in the field of rehabilitation.

That is why I launched a totally new program

for a total offensive nation-wide and to all segments of society against drug abuse.

The program I announced includes strong efforts to cut off the supply of dangerous narcotics at their sources in other countries. It more than doubles our budget for rehabilitation. It moves against drug abuse in the military. It sets up a new command post on drugs in the Executive Office of the President.

The President has many responsibilities. There are probably too many responsibilities that come to his desk. But this problem is so serious that I feel that the President must take personal command and personal responsibility. And that is what I have done.

That is why I have named as head of this new office in the White House one of the great experts in this field, a man — Dr. Jerome Jaffe — of great experience in Illinois. I think he represents the best of America's medical profession. He is tough. He is no nonsense. But he is also a man who is compassionate. He understands the problem. There is one assignment I have given, among many others. Believe it or not, there are nine Federal agencies that work in the field of drugs in the United States in drug abuse, and too often I have found, over the past two years, that those agencies are competing with each other for personnel, competing with each other for attention, competing with each other before Congressional committees for funds.

And I have given one instruction to Dr. Jaffe that I have ordered him to carry out without any question, and that is this: The Government agencies, the nine of them in this field, are going to quit fighting each other and start fighting the problem a little more.

Now, the offensive that I mentioned in drug abuse places new emphasis on education because that, of course, is the most important of all. We can stop the source of supply in one country and it moves to another. We can have stronger enforcement and people will go around it if the demand is great enough and if people are willing to pay. We can have rehabilitation but then that is probably too late if the problem goes that far.

So we need education — education as to the dangers of drug abuse. This is an area where human resources are going to make the difference. But the effectiveness of education depends ultimately on communication, on the trust that grows up between one human being and another. What is a good educator? Well, he must combine compassion with firmness, a sense of authority with a sense of sympathy, a capacity for discipline, a capacity for involvement.

I just described you. That is what doctors are. These are virtues you possess. They are values that you and your profession prize. And that is why I look to the medical profession, or all America looks to the medical profession, for leadership in this field of education in drug abuse.

Let me treat two aspects of the probiem, one that is somewhat in your field. And if I step over the bounds of my own competence, I, of course, will expect you to correct me in any resolutions you adopt.

First of all, let me point to the link, and I believe there is a link, which exists between the inappropriate use of drugs within the medical context and the abuse of drugs outside that context. Consider these facts for a moment: In the last four years alone, the production and distribution of tranquilizers in our country has doubled. During 1970, 5 billion doses of tranquilizers, 3 billion doses of amphetamines and 5 billion doses of barbiturates were produced in this country. Listen to this: The estimate is that 50 percent of the amphetamines and barbiturates were diverted into illegal sales. So there is the problem in terms of education as well as enforcement.

Tranquilizers, amphetamines and barbiturates, as you know, are known as psychotropic or mind-altering drugs. It is estimated that one-third of all Americans between the ages of 18 and 74 used a psychotropic drug of some type last year. And little wonder — for there were enough drugs of this type available last year to medicate every adult in the United States at very high dosage rates for more than 11 days.

Now, what does all this mean? What it means is that we have created in America a culture of drugs. We have produced an environment in which people come naturally to expect that they can take a pill for every problem — that they can find satisfaction and health and happiness in a handful of tablets or a few grains of powder.

We have to face up to the fact that within this climate it is altogether too easy for the abuse of drugs, not the prescription, now, and the use, but the abuse of drugs to flourish in that kind of climate, in a climate where individuals believe, because of inadequate educa-

tion, that they can take a pill for every problem.

The medical profesesion was among the first to recognize this problem, to identify it as one of its causes, the fact that many physicians are prescribing drugs too often and too easily.

A number of the voices from your community have suggested recently that certain drugs may have become a crutch for some doctors as well as their patients, masking but not correcting more basic physical and emotional problems.

I noted with interest that your own Council on Drugs spoke to this subject only a few weeks ago. And I have noticed, too, that many doctors are now moving to strictly limit their prescription of such substances. I would hope, and I say this respectfully in an area where you are the experts and I am not, I hope you will continue to give careful consideration to this matter — for your role in shaping this country's basic attitude toward drugs will be decisive.

Let me turn now to a second way in which doctors can help. I want to ask your help, I ask the help of the doctors of this Nation in a program of education, educating our people in the proper role of drugs and drug information, drug counseling, drug treatment.

Years ago, you remember that when most Americans lived in small towns we looked to the family doctor for guidance not just with regard to our physical health but in many other aspects of life. It may have been somewhat easier for many doctors to utilize their enormous potential as effective teachers in our society because of that situation that existed then.

I member my own doctor, a family doctor, Dr. Thompson, of Whittier, California. He was a fine doctor but he was a community leader, and when he spoke on issues, we listened. When he came out to our school to speak on the problems of health and other related problems, we listened, we paid attention, we followed his advice. Some doctors still play this role today. You do it voluntarily. You contribute enormously of your time without compensation in educating America in these and other fields. But more doctors need to be playing it. We need you, especially in the field of drug education.

I have met recently in this field with the leaders of the Advertising Council, with the leaders of the television and radio industries, with the leaders of opinion-makers, editors, publishers and so forth throughout this country, and they have enlisted in this battle.

But no one, believe me, no one can have more effect when he or she speaks out than a doctor on this issue of drug abuse. You speak with greater authority, because you speak about the power of drugs to save life, and we must look to that, the tremendous progress that we have made in that field — but also the power to destroy it.

Rather than preach moralistically about the sinfulness of drugs, you can teach realistically about their physical and psychological impact, and you can bring tremendous credibility to this undertaking. Many doctors have been moving in that direction.

I noted, for example, that in Arizona, the Maricopa County Medical Society has pulled together an impressive drug control program for Phoenix, and I am happy to see that this Association has been actively encouraging such efforts. It has developed education materials to help local physicians as they go out to wage war against drugs in the schools and churches and neighborhoods of America.

We ask for a part of your time every day in this field if it can be effectively used.

The time has come for a greater effort, and that is why I ask for your help and the help of this organization. I realize that you have engaged in many enterprises of this type for which the Nation is in your debt. I know that one outstanding voluntary effort, the AMA Volunteer Physicians for Vietnam — and I have met several of your members who have gone to Vietnam, given of their time and effort — for the purpose of carrying out what is called a Project Vietnam, and its purpose is to improve medical care in that country for the people of that country. It has had very great success.

Now, as our attention begins to center again on domestic challenges, the AMA can once again render outstanding service at a point of critical need by helping to develop what I would like to call Project USA — a project which would marshal the tremendous energy, the brains, the dynamism, the leadership — the leadership — of the doctors of this country in an all-out battle against drug abuse. And against it in terms of educating particularly the young people of this country about it.

The best way to end drug abuse is to prevent it, and America's doctors are the indispensable front-line soldiers for success in this all important battle.

I began these remarks today by saying that the doctors of America have done a great deal for their country. But I also noted that the greatest reward for doing is the opportunity for doing more. There is much to be done in this Nation — in the fight against drugs, which I have covered, in other areas.

And once again, Americans are looking to the doctors of their land for leadership. We are looking to the doctors of this land for leadership beyond the reform of our health care system in which you really provide leadership, and you should, because it affects you directly — beyond drug abuse, which is so closely related to your profession, where I am sure you will provide leadership.

America at this time needs leadership from those in the medical profession, and your wives, the AMA Auxiliary that I know is meeting here in Atlantic City with you — all across this country, not simply in the areas that affect you directly, but in the area of national problems.

I know many of you are so concerned whenever anybody suggests that you get into politics, and I do not speak in any partisan sense. I am not concerned about whether you are in politics in one party or the other. The main thing is to be in. I have heard a doctor say on occasion, "I am only interested in my profession; I am not interested in politics."

Let me tell you something: He better get interested in politics or he won't have any profession to be interested in.

And I am not referring just to politics to defend your profession. You should do that. Defend what is best in it. Correct what needs to be corrected. But I am referring to politics in the broader sense of leadership.

Let me put it in historical perspective. One hundred and ninety years ago America was one of the weakest countries in the world, militarily, and one of the poorest countries in the world, economically. But it was a country that was rich in spirit, and thereby caught the imagination of the world and has held it ever since. Today America is the strongest nation in the world militarily, and the richest nation by far economically. The major problem we have to ask ourselves as Americans is: At a time when we are rich in goods and strong in arms, are we poor in spirit?

I don't think so. As I go across this land I am always reassured as I see so many Americans that have a deep conviction about the goodness of this country, who give of their time and efforts to make it a better country, who are proud of what this Nation has done for its own people and what it has done in its leadership abroad. And yet, of course, there are other voice that are heard throughout the land, those that run America down, those that say our system is rotten, those that say America is an ugly country, those who say wouldn't it be well if some other nation were in a position of leadership and, therefore, follow with the proposition that America withdraw onto itself and get away from the position of leadership in which it presently finds itself, with that leadership thrust upon it — not sought but thrust upon it — because of the accidents of history, the fact that in the free world there is no other nation rich enough or strong enough to assume that position of leadership.

What does all this have to do with doctors? Very simply this: In a community, a doctor is listened to. He is listened to about the health, of course, of his patients. But an individual can be physically healthy and he can be without health in a moral or spiritual sense, without character. A nation can be physically strong and unless it has moral character and stamina and faith in itself, and confidence, that nation is weak in a way that it cannot compensate with all the physical strength in the world.

So we go back to the early days of this Republic 190 years ago — weak, poor but strong in spirit, and here is America — rich, strong. Question: Are we weak in spirit?

And the answer, of course, would be found not simply in what a President says or a Senator — and we have some distinguished Senators here — or a Congressman or a governor. But it comes from leaders throughout the country like yourselves. That is why when I speak of politics, I do not speak in a partisan sense. I do not speak in a special sense in which you are concerned about what government is going to do to the medical profession. But I speak in this sense: You know what a good country this is. You know what a great education you have. You know that when somebody is really ill, that the best medical care in the world is here and not in some other country, generally speaking.

You know that as far as this system that has been run down so much around the world — when you go around the world to all the other countries they look to America, and the traffic,

where there is traffic, is usually one-way. They are coming this way, there are not going the other way, when people have a choice.

You know that this system of government that we have talked about and this economic system has its faults. There are too many poor people in America. There is too much discrimination and prejudice and all these other problems. But look at America's strengths. Look at the fact that there is more freedom, more opportunity, more income even for the poor because of the wealth of our country than there is in 85 percent of the rest of the world.

So here we stand, looking at America. Examine its faults. Let us correct them. We need your help in your special field. But let us also recognize that in this particular period in this Nation's history — and that was not true 190 years ago — the health of America in this broader sense, not just physical but moral and spiritual and mental — that health will determine whether peace and freedom survive in the world.

We have no choice in the matter and if you ask yourself the question: If America does not have the role of world leadership, what other nation do you want to have it?

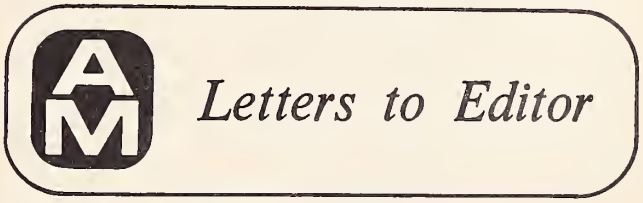
I should say the world can be fortunate that America, with its faults — and we have made many in foreign policy through our history — with its faults, let's look at the strengths: We have been in four wars in this century — World War I, World War II, Korea and now Vietnam. We have made our mistakes, but, to the great credit of America — and this can be said proudly and should be said by any American — Americans have fought and died not for an acre of territory, not to get domination over any other people, but for the right of other people to enjoy the freedom and the peace that we have, and this is something we must demand.

And so to the American Medical Association, representing tremendous competence, representing also leadership, the best educations that American can provide, I ask you today to join, to give a little more of your time than you have, not only in working for your profession — that must come first — but also in serving your country, providing the leadership that this country craves for in every community in the Nation.

The health of America is in your hands, and by its health I speak not just of its physical health — its mental health, its moral health, its character. Meet that challenge.

WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION CONTRIBUTIONS TO AMA-ERF
1951 - 1971

1951-1952	$ 15,734.00
1952-1953	21,043.22
1953-1954	44,635.94
1954-1955	74,447.70
1955-1956	90,605.39
1956-1957	113,540.56
1957-1958	126,366.68
1958-1959	140,500.00
1959-1960	175,010.60
1960-1961	196,577.40
1961-1962	243,897.22
1962-1963	278,410.35
1963-1964	307,318.14
1964-1965	320,121.87
1965-1966	345,573.81
1966-1967	384,649.48
1967-1968	389,824.64
1968-1969	428,875.77
1969-1970	498,950.69
1970-1971	550,927.01
GRAND TOTAL	$4,747,010.47



Dear Sir:

Referring to the cover picture on the May 1971 issue of "Arizona Medicine" as well as the photographic reproduction of the likeness of our President, Jim Grobe, on page 389 of the same issue.

Will you please advice your readers on which side President Jim parts his hair?

Cordially yours,
Walter V. Edwards, M.D.

EDITOR'S NOTE: Following extensive research, we have determined that President Jim parts his hair on the left. Following a year in office it may be a moot point, as many presidents lose their hair during their term of office.

In Memoriam



DAVID BRINKERHOFF, M.D., F.A.C.S.
1899 - 1971

"A tender-hearted, compassionate disposition, which inclines men to pity, and to feel the misfortunes of others, and which is incapable of involving any man in ruin and misery, is, of all tempers of mind, the most amiable."

David Brinkerhoff, M.D., F.A.C.S., died March 20, 1971, in Good Samaritan Hospital, Phoenix, Arizona. He was seventy-one years old.

Born in Auburn, New York, December 14, 1899, he received his primary education in schools in Wisconsin, and was graduated from the University of Los Angeles in 1923. In 1927, he received his Medical Degree from Stanford University, followed by an internship at Los Angeles General Hospital from 1928 to 1929, and residency at San Francisco General Hospital from 1929 to 1931.

Dr. Brinkerhoff commenced his private practice in Phoenix, Arizona, in 1931. He married Retta Barnard in 1932. By 1946, his family had grown to include two children, Jean and Stephen. Having previously served in World War I in 1918, Dr. Brinkerhoff interrupted his practice to become a Lieutenant Commander in the Navy from 1942 to 1944.

Dr. Brinkerhoff served our hospitals well, giving unstintingly of his time and abilities. He was an asset to his fellow men, always giving more than he received. In each area of his involvement, the scene was the better for his presence. All who knew him honored and respected his gentle and kind manner. He was a man of compassion, whose concern and deep humility were felt by all.

Dedicated to hard work and loyalty, his good humor and good grace combined to make him a companionable co-worker. His competence in his chosen field was solidly built of native intelligence, good values, high motivation, and excellent training.

As a husband, father, and physician, in sum as a man, his life was an unqualified success. He was a giant among men — a man who somehow stood apart, a pace ahead of his contemporaries. The shadow he cast was more erect than most. The void he left will not soon be filled.

Yet, he left us all something quite meaningful, his family, his colleagues, his patients, and his innumerable friends — all the people whose lives he touched. He left a legacy of Hope. Hope that perhaps each of us in our own way can attain in some small measure the amount of contentment, peace, and inner harmony that he had found.

"There are some men who should have mountains to bear their names to time."

The life of David Brinkerhoff will not soon be forgotten. In this world today there are many hearts in which he lives.

B. E. Weissman, M.D.

JOHN E. MULSOW, M.D.
1888 - 1971

John E. Mulsow was born November 8, 1888; death occurred January 1971. He was graduated from Marquette University in 1916. In 1948 he obtained a license to practice medicine in Arizona, and became a member of the Pima County Medical Society the following year. During the course of his practice of opthalmology and otorhinolaryngology, he maintained an active participation in several specialty societies, until his retirement.

DEMOGRAPHIC STUDY OF LICENSED MEDICAL DOCTORS IN ARIZONA

THE BOARD OF MEDICAL EXAMINERS WOULD TAKE THIS OPPORTUNITY TO EXPRESS ITS APPRECIATION TO THE NINETY PERCENT (90%) OF THE ARIZONA PHYSICIANS WHO WERE KIND ENOUGH TO PARTICIPATE AND ESPECIALLY TO DOCTOR ALAN HUMPHREY, ARIZONA REGIONAL MEDICAL PROGRAM, WHO COMPILED THE STATISTICAL RESULTS.

In order to gain a reasonably accurate picture of the delivery of medical services in Arizona, the Arizona Board of Medical Examiners and the Arizona Regional Medical Program launched a cooperative effort in 1970 in the form of a demographic study of licensed medical doctors in Arizona. The study focused essentially on physician location, primary medical specialty with respect to location, age correlated with years out of medical school and patient load.

Sources for the analyzed information presented in this brief synopsis of the findings included the Annual Directory published by the Board of Medical Examiners and information maintained by the Board, along with a questionnaire sent to physicians in September of 1970.

Physicians and the Population

In the ten years between 1960 and 1970, the population of Arizona increased by 36% and the number of practicing physicians serving that population increased by 90%. Table 1, which lists the number of active M.D.'s in 1960, 1965 and 1970 and their ratio per 10,000 population, indicates that the physician to population ratio increased from 8.6 to 12.1 during that time (41% increase) though this is largely a reflection of the increase in physician per population ratio of Maricopa and Pima Counties.

For the State, there has been a 41% increase in the physician population ratio but only a 4% increase in the southern counties. Sixty-four percent of the physicians in the state are presented in the survey with a percentage response or return of questionnaires of 90%.

Because of a problem in utilizing mailing lists as a source of determining the county and specialty of physicians, and the incomplete information sometimes obtained on the questionnaire from physicians, the total number of physicians by county and specialty will not coincide with the total numbers in Table 1. In addition, 8.3% of the physicians answering the questionnaire listed two specialties and 2.3% of the physicians listed three or more specialties. In the following tables, since it was determined necessary to assess whether or not a specialty was available in a particular community, each specialty was counted as a unit; therefore, if a physician listed two specialties he would be counted twice. (The total number of doctors in Arizona as of 1970 was 2,125 as opposed to 2,322 reported in Table 2. Similarly, there were 1,333 physicians that responded to the questionnaire as opposed to the 1,493 given in Table 2). It should also be noted in Tables 2 and 3 that the number surveyed and the M.D./population ratio for the specialties and county groups are proportional so that the information presented in the following tables based on the survey information is fairly representative of the various specialties by county groups. The reason for the low survey percentages of retired and miscellaneous physicians is that questionnaires were not sent to most of these individuals. The percent of physicians surveyed for most specialties was around 60-70%.

Specialty Distribution

There are about half as many physicians in the northern and southern counties per individual than there are in Maricopa and Pima Coun-

TABLE 1. THE NUMBER AND RATIO OF ACTIVE DOCTORS OF MEDICINE PER POPULATION x 10,000 IN ARIZONA, 1960 - 1965 - 1970

	NUMBER			%	RATIO			%
	1960	1965	1970	INCREASE 1960-1970	1960	1965	1970	INCREASE 1960-1970
NORTH								
Apache	7	13	10		2.3	3.3	3.1	
Coconino	26	33	47		6.2	6.5	9.9	
Mohave	4	8	17		5.2	5.7	6.8	
Navajo	8	9	12		2.1	2.0	2.6	
Yavapai	24	33	37		8.3	9.7	10.3	
TOTAL OR AVG.	69	96	123	78.0	4.7	5.2	6.6	40.0
Maricopa	625	961	1321	111.0	9.4	11.5	13.7	46.0
Pima	296	387	528	78.0	11.1	12.3	15.3	38.0
SOUTH								
Cochise	28	31	33		5.1	5.0	5.4	
Gila	21	17	19		8.1	6.2	6.7	
Graham	7	6	7		5.0	3.6	4.3	
Greenlee	7	6	4		6.1	5.7	4.0	
Pinal	28	37	37		4.5	5.6	5.4	
Santa Cruz	8	8	11		7.4	5.7	8.0	
Yuma	30	34	42		6.5	6.1	7.0	
TOTAL OR AVG.	129	139	153	19.0	5.7	5.5	5.9	4.0
STATE TOTAL OR AVG.	1119	1583	2125	90.0	8.6	10.0	12.1	41.0

TABLE 2: NUMBER OF MEDICAL DOCTORS AND RESPONSE TO THE QUESTIONNAIRE BY COUNTY GROUPS* AND SPECIALTY GROUPS† - 1970

	NORTH		MARICOPA		PIMA		SOUTH		TOTAL	
	T	R	T	R	T	R	T	R	T	R
General Practice	55	32	289	202	68	46	106	61	518	341
Internal Medicine	12	6	165	117	99	57	9	8	285	188
General Surgery	18	14	131	83	54	36	24	16	227	149
Obstetrics-Gynecology	9	7	102	76	30	24	11	10	152	117
Pediatrics	6	4	77	56	33	21	11	10	127	91
Psychiatry	3	1	79	37	31	19	4		117	57
Pathology, Forensic Pathology	3	2	39	12	17	6	3	3	62	23
Radiology	5	4	50	25	24	13	3	1	82	43
Anesthesiology	5	2	73	55	13	8	5	4	96	69
Dermatology			20	18	11	7			31	25
Ophthalmology	3	1	48	37	21	15	8	3	80	56
Otolaryngology			31	21	14	9	4	2	49	32
Medical Sub-Specialties	1		99	74	26	14	1		127	88
Surgical Sub-Specialties	4	3	109	83	44	35	5	4	162	125
Misc.	8	2	47	14	25	5	3	2	83	23
Other	2	2	45	38	19	19	2	2	68	61
Retired	8		28	3	17		3	2	56	5
Total	142	80	1432	951	546	334	202	128	2322	1493

*Northern Counties: Apache, Coconino, Mohave, Navajo, Yavapai
Southern Counties: Cochise, Gila, Graham, Greenlee, Pinal, Santa Cruz, Yuma

†Medical Sub-Specialties - Allergy
Cardiovascular Disease
Gastroenterology
Neurology
Pulmonary Disease
Surgical Sub-Specialties- Colon & Rectal Surgery, Proctology
Neurological Surgery
Orthopedic Surgery
Plastic Surgery
Thoracic Surgery
Urology
Misc. - Administrative Medicine
Aviation-Aerospace Medicine
General Preventive Medicine
Physical Medicine & Rehabil.
Public Health

ties (Table 3). This difference is fairly consistent across specialties with striking examples (i.e., General Practice, Internal Medicine, General Surgery, Obstetrics and Gynecology, Surgical Sub-specialties, etc.).

One of the suggested solutions to the problem of not enough physicians in rural communities is to relocate physicians there. For those physicians practicing in the State of Arizona at the present time, the percentage that have relocated from areas of low population density to areas of high population density and vice versa is given in Table 4 for two time periods — 1950-1959 and 1960-1969. There was a total of 139 recorded physicians in the twenty-year period that relocated within the state. However there is still only about 18% of the relocating physicians going to smaller communities. There is a significant though slight trend over these two time periods for physicians to relocate from larger cities to smaller cities instead of from smaller to larger.

Age Distribution

The average age of physicians by county groups and specialties (Table 5) indicates that physicians in the surveyed group do not differ significantly from the totality of physicians in the state. In general, the age of physicians in the southern counties is greater than the rest of the state. Related to age is the number of years since graduation from medical school (Table 6) which is greater in the southern counties than the others though not appreciably so. However, some specialties such as Dermatology, Pathology and Forensic Pathology and Otolaryngology have physicians out of medical school for longer than the average number of years.

Patient Load

Table 7 shows that, although the average number of patients seen by physicians is approximately 21 per day, there is considerable variation among specialties and counties. The range among counties is from 36 per day in Greenlee County to a low of 16 in Yavapai and Mohave counties which is reflected in the 25.5 patients seen in the southern counties and the 22.8 in the northern counties. The range in specialties is as might be expected with the highest being the

TABLE 3: RATIO OF MEDICAL DOCTORS SPECIALTIES IN ARIZONA PER 10,000 POPULATION (T) AND RATIO OF RESPONSES TO THE QUESTIONNAIRE (R) PER 10,000 POPULATION BY COUNTY AND SPECIALTY GROUPS - 1970

	NORTH		MARICOPA		PIMA		SOUTH		STATE	
	T	R	T	R	T	R	T	R	T	R
General Practice	2.95	1.72	3.00	2.10	1.97	1.33	4.12	2.37	2.96	1.95
Internal Medicine	.64	.32	1.71	1.21	2.87	1.65	.35	.31	1.63	1.07
General Surgery	.96	.75	1.36	.86	1.56	1.04	.93	.62	1.30	.85
Obstetrics-Gynecology	.48	.38	1.06	.79	.87	.70	.43	.39	.87	.67
Pediatrics	.32	.21	.80	.58	.96	.61	.43	.39	.72	.52
Psychiatry	.16	.05	.82	.38	.90	.55	.16	.0	.67	.33
Pathology, Forensic Pathology	.16	.11	.40	.12	.49	.17	.12	.12	.35	.13
Radiology	.27	.21	.52	.26	.70	.38	.12	.04	.47	.25
Anesthesiology	.27	.11	.76	.57	.38	.23	.19	.16	.55	.39
Dermatology	.0	.0	.21	.19	.32	.20	.0	.0	.18	.14
Ophthalmology	.16	.05	.50	.38	.61	.43	.31	.12	.46	.32
Otolaryngology	.0	.0	.32	.22	.41	.26	.16	.08	.28	.18
Medical Sub-Specialties	.05	.0	1.03	.77	.75	.41	.04	.0	.72	.50
Surgical Sub-Specialties	.21	.16	1.13	.86	1.27	1.01	.19	.16	.92	.71
Misc.	.43	.11	.49	.14	.72	.14	.12	.08	.47	.13
Other	.11	.11	.47	.39	.55	.55	.08	.08	.39	.35
Retired	.43	.0	.29	.03	.49	.0	.12	.08	.32	.03
TOTAL*	7.61	4.29	14.87	9.87	15.83	9.68	7.84	4.97	13.25	8.52

*Higher than in Table 1 due to physicians with multiple specialties

TABLE 4: RELOCATION OF PHYSICIANS WITHIN THE STATE OF ARIZONA, 1950-1959 and 1960-1969 (PERCENTAGE OF DECADE IN PARENTHESIS)

	COMMUNITY			
DECADE	LARGE TO SMALL	SAME	SMALL TO LARGE	TOTAL
1950-1959	3 (8)	14 (39)	19 (53)	36
1960-1969	19 (18)	52 (50)	32 (31)	103
Total	22 (16)	66 (47)	51 (37)	139

general practitioners with approximately 31 per day with the lowest in Pathology of about 2 per day. The general practioners and internists in the northern and southern counties have the greatest patient load, seeing on the average of 29 patients per day as opposed to Maricopa and Pima counties of about 23 patients per day. The differential between number of visits and number seen is greatest in the medical sub-specialties, Pathology and Radiology. The average number of patients seen can be misleading without knowing the range in number of patients. Tables 8 and 9 contain the maximum and minimum values per specialty and county group. A more complete frequency distribution for each specialty is available upon request.

Table 8 shows the number of years physicians have been practicing in their present location. Again, the southern counties have the oldest group. This information, along with the patient load, age and increase in number of physicians/population ratio indicates that there is a problem in southern Arizona with respect to physician-patient ratio.

Presented in this report are some of the results of the 1970 Physician Demographic Study. This will be repeated annually in order to measure trends and changes in the physician manpower profile of the state. The cooperation of the physicians in relinquishing this information is greatly appreciated and any suggestions as to the interpretation of this data is desired.

TABLE 5: THE AVERAGE AGE OF THE DOCTORS (M.D.) IN ARIZONA BY COUNTY GROUPS AND SPECIALTY GROUPS - 1970*

	NORTH		MARICOPA		PIMA		SOUTH		STATE	
	TOT.	RESP.	TOT.	RESP.	TOT.	RESP.	TOT.	RESP.	TOT.	RESP.
General Practice	46.9	45.0	48.1	47.7	52.0	51.0	51.5	50.4	49.2	48.4
Internal Medicine	49.8	46.5	46.4	46.2	48.9	48.7	44.7	46.4	47.4	47.0
General Surgery	47.7	45.7	49.2	51.2	46.9	47.3	50.8	49.1	48.7	49.5
Obstetrics-Gynecology	40.7	39.9	44.8	44.5	47.8	48.0	44.6	45.7	45.1	45.0
Pediatrics	43.5	41.5	43.2	43.2	47.8	44.4	44.1	44.1	44.5	43.5
Psychiatry	42.3	48.0	48.1	46.0	47.1	47.9	48.8	----	47.7	46.7
Pathology, Forensic Pathology	45.3	44.5	47.2	51.2	47.2	54.2	45.0	45.0	47.0	50.6
Radiology	49.4	45.8	46.3	50.7	46.7	47.4	57.7	77.0	47.0	49.8
Anesthesiology	49.6	47.5	45.9	46.2	46.1	45.5	40.4	42.0	45.8	45.9
Dermatology	----	----	50.4	49.6	48.0	52.4	----	----	49.5	50.4
Ophthalmology	50.7	39.0	49.8	49.3	51.0	47.7	53.4	64.3	50.6	49.5
Otolaryngology	----	----	52.4	50.0	49.4	49.2	66.8	70.0	52.7	51.0
Medical Sub-specialties	60.0	----	45.7	45.6	44.2	41.4	62.0	----	45.7	44.9
Surgical Sub-specialties	57.8	50.3	46.5	46.6	47.1	47.0	41.6	41.8	46.8	46.6
Misc.	54.1	59.5	52.8	51.3	54.1	53.6	54.3	59.5	53.4	53.2
Other	53.3	53.3	43.6	42.9	47.6	47.6	41.5	41.5	44.7	44.4
Retired	70.8	----	71.2	71.7	72.7	----	67.7	68.5	71.4	70.4
Avg.	49.1	45.5	47.7	47.2	49.4	48.2	50.4	49.6	48.4	47.5

*The Total figure represents the average age of the physicians in Arizona and the Response figure represents the average age of the physicians who responded to the questionnaire.

TABLE 6: THE AVERAGE NUMBER OF YEARS SINCE THE RESPONDING DOCTORS (M.D.) GRADUATED FROM MEDICAL SCHOOL BY COUNTY GROUPS AND SPECIALTY GROUPS - 1970

	NORTH		MARICOPA		PIMA		SOUTH		STATE	
	NO.	AVG.	NO.	AVG.	NO.	AVG.	NO.	AVG.	NO.	AVG.
General Practice	31	18.0	201	19.5	45	23.4	61	22.7	338	20.5
Internal Medicine	6	18.5	117	19.4	57	23.0	8	19.3	188	20.5
General Surgery	14	18.2	81	24.1	35	21.9	16	22.6	146	22.9
Obstetrics-Gynecology	7	10.1	76	17.6	24	21.7	10	18.2	117	18.0
Pediatrics	4	14.5	56	16.3	21	18.8	10	16.6	91	16.8
Psychiatry	1	23.0	37	19.1	19	21.9			57	20.1
Pathology, Forensic Pathology	2	18.5	12	25.4	6	28.7	3	14.0	23	24.2
Radiology	4	17.0	25	24.0	13	19.8	1	54.0	43	22.8
Anesthesiology	2	19.5	55	18.6	8	18.8	4	14.5	69	18.4
Dermatology			18	22.3	7	26.3			25	23.4
Ophthalmology	1	13.0	37	22.4	15	21.3	3	38.3	56	22.8
Otolaryngology			21	23.2	9	23.8	2	44.5	32	24.7
Medical Sub-Specialties			74	18.9	14	15.8			88	18.4
Surgical Sub-Specialties	3	20.7	83	19.6	35	21.5	4	15.5	125	20.0
Misc.	2	32.5	14	22.6	5	21.4	2	32.0	23	24.0
Other	2	20.5	38	16.2	19	21.9	2	16.5	61	18.1
Retired			3	43.7			2	41.5	5	42.8
TOTAL/AVG.	79	17.7	948	20.0	332	22.0	128	22.2	1487	20.5

TABLE 7. AVG. NO. OF PATIENTS VISITING A DOCTOR (M.D.) AND SEEN BY A DOCTOR (M.D.) PER DAY BY COUNTY GROUPS AND SPECIALTY GROUPS AS REPORTED BY THE SURVEY - 1970

	NORTH		MARICOPA		PIMA		SOUTH		STATE	
	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN
General Practice	33.4	31.3	33.2	30.2	29.9	27.2	36.3	34.6	33.3	30.7
Internal Medicine	24.7	27.2	15.7	15.9	19.1	18.9	18.9	22.3	17.2	17.4
General Surgery	17.9	18.2	15.1	15.7	16.2	16.9	15.9	15.7	15.7	16.3
Obstetrics-Gynecology	15.1	15.5	22.5	22.1	25.5	24.2	24.4	19.1	22.9	21.9
Pediatrics	19.5	19.6	22.5	21.2	25.3	24.3	19.9	19.6	22.7	21.6
Psychiatry			12.5	13.9	9.2	9.2			11.4	12.3
Pathology			4.0	1.5			16.5	3.0	12.3	1.9
Radiology	45.0	13.8	45.2	17.8	47.9	15.7	20.0	20.0	45.4	16.8
Anesthesiology	6.0	5.0	5.9	6.8	12.1	11.3	13.0	13.8	7.0	7.7
Dermatology			35.8	35.7	32.4	32.4			34.7	34.7
Ophthalmology	23.0	23.0	22.5	22.6	20.6	20.1	23.3	15.0	22.1	21.4
Otolaryngology			21.7	21.1	27.2	26.7	37.5	22.5	24.2	22.8
Medical Sub-specialty			19.2	12.4	15.3	11.3			18.6	12.3
Surgical Sub-specialty	1.9	1.9	17.5	20.1	16.6	18.2	6.7	9.4	16.4	18.7
Misc.	29.5	21.2	16.3	14.4	18.8	12.2	9.0	8.9	17.7	14.2
Other	4.1	3.1	14.7	13.8	13.0	13.2	4.5	7.0	13.5	13.0
Area	25.3	22.8	21.8	20.0	21.5	19.6	26.8	25.5	22.4	20.6

TABLE 8: THE MAXIMUM NUMBER OF PATIENTS VISITING A DOCTOR (M.D.) AND SEEN BY A DOCTOR (M.D.) PER DAY BY COUNTY GROUPS AND SPECIALTY GROUPS AS REPORTED BY THE SURVEY - 1970

	NORTH		MARICOPA		PIMA		SOUTH		STATE	
	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN
General Practice	60.0	60.0	80.0	75.0	70.0	50.0	100.0	80.0	100.0	80.0
Internal Medicine	63.8	63.8	50.0	40.0	50.0	34.0	30.0	35.0	63.8	63.8
General Surgery	35.0	45.0	50.0	50.0	35.0	35.0	35.0	30.0	50.0	50.0
Obstetrics-Gynecology	30.0	30.0	55.0	55.0	40.0	35.0	60.0	40.0	60.0	55.0
Pediatrics	30.0	30.0	50.0	40.0	40.0	40.0	42.0	36.4	50.0	40.0
Psychiatry			50.0	40.0	30.0	30.0			50.0	40.0
Pathology			4.0	3.0			30.0	3.0	30.0	3.0
Radiology	75.0	20.0	150.0	50.0	100.0	35.0	20.0	20.0	150.0	50.0
Anesthesiology	10.0	7.5	20.0	20.0	30.0	30.0	40.0	40.0	40.0	40.0
Dermatology			80.0	80.0	50.0	50.0			80.0	80.0
Ophthalmology	23.0	23.0	50.0	50.0	35.0	30.0	40.0	25.0	50.0	50.0
Otolaryngology			37.0	30.0	60.0	60.0	60.0	30.0	60.0	60.0
Medical Sub-specialty			170.0	28.5	54.0	28.0			170.0	28.5
Surgical Sub-specialty	3.8	3.8	50.0	45.0	40.0	30.0	10.0	15.0	50.0	45.0
Misc.	35.0	24.5	60.0	40.0	50.0	20.0	9.0	10.0	60.0	40.0
Other	8.0	6.0	57.0	50.0	55.0	55.0	6.0	9.0	57.0	55.0
AREA	75.0	63.8	170.0	80.0	100.0	60.0	100.0	80.0	170.0	80.0

TABLE 9: THE MINIMUM* NUMBER OF PATIENTS VISITING A DOCTOR (M.D.) AND SEEN BY A DOCTOR (M.D.) PER DAY BY COUNTY GROUPS AND SPECIALTY GROUPS AS REPORTED BY THE SURVEY - 1970

	NORTH		MARICOPA		PIMA		SOUTH		STATE	
	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN	VISITS	SEEN
General Practice	10.0	10.0	3.0	.5	3.0	2.0	4.0	1.0	3.0	.5
Internal Medicine	5.0	5.0	.6	.6	2.0	3.0	11.2	10.0	.6	.6
General Surgery	1.0	1.2	.8	.8	.2	.2	2.4	2.4	.2	.2
Obstetrics-Gynecology	1.5	1.5	1.8	1.5	4.0	4.0	1.5	2.0	1.5	1.5
Pediatrics	8.0	6.0	1.2	1.5	7.0	6.0	1.8	1.8	1.2	1.5
Psychiatry			2.5	2.5	.7	.7			.7	.7
Pathology			4.0	.6			3.0	3.0	3.0	.6
Radiology	30.0	10.0	2.0	1.4	20.0	5.0	20.0	20.0	2.0	1.4
Anesthesiology	2.0	2.4	3.6	2.5	5.0	5.0	3.0	3.0	2.0	2.4
Dermatology			10.0	8.8	10.0	10.0			10.0	8.8
Ophthalmology	23.0	23.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0
Otolaryngology			2.2	1.8	15.0	15.0	15.0	15.0	2.2	1.8
Medical Sub-specialty			.1	.2	.4	2.0			.1	.2
Surgical Sub-specialty	.5	.5	2.1	3.2	.2	.2	2.1	2.8	.2	.2
Misc.	24.0	18.0	1.2	1.2	1.5	1.5	9.0	7.8	1.2	1.2
Other	.2	.2	.4	.4	.2	.2	3.0	5.0	.2	.2
AREA	.2	.2	.1	.2	.2	.2	1.5	1.0	.1	.2

*excluded zero number of patients as minimum

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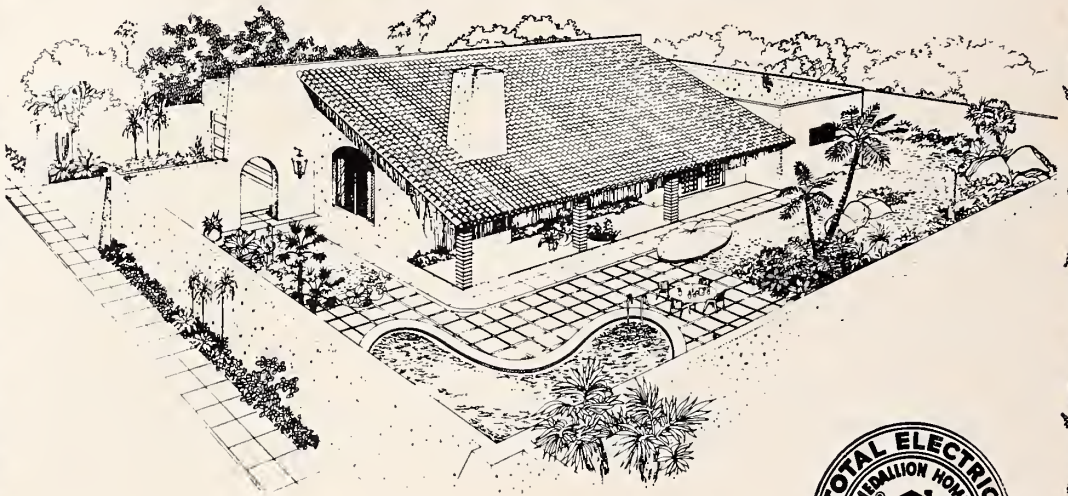
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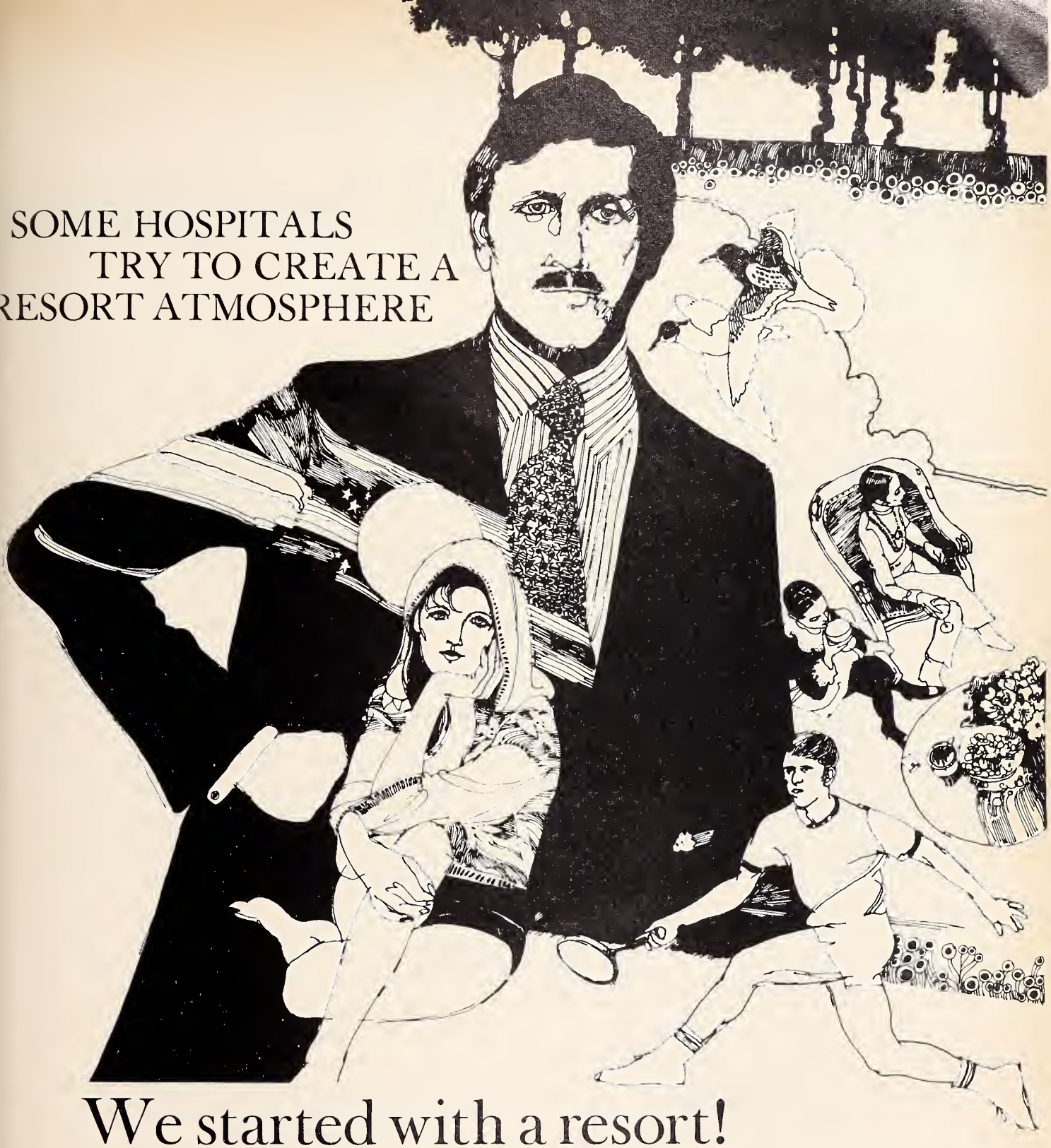
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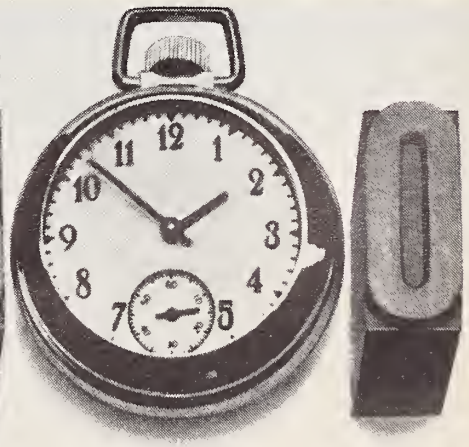
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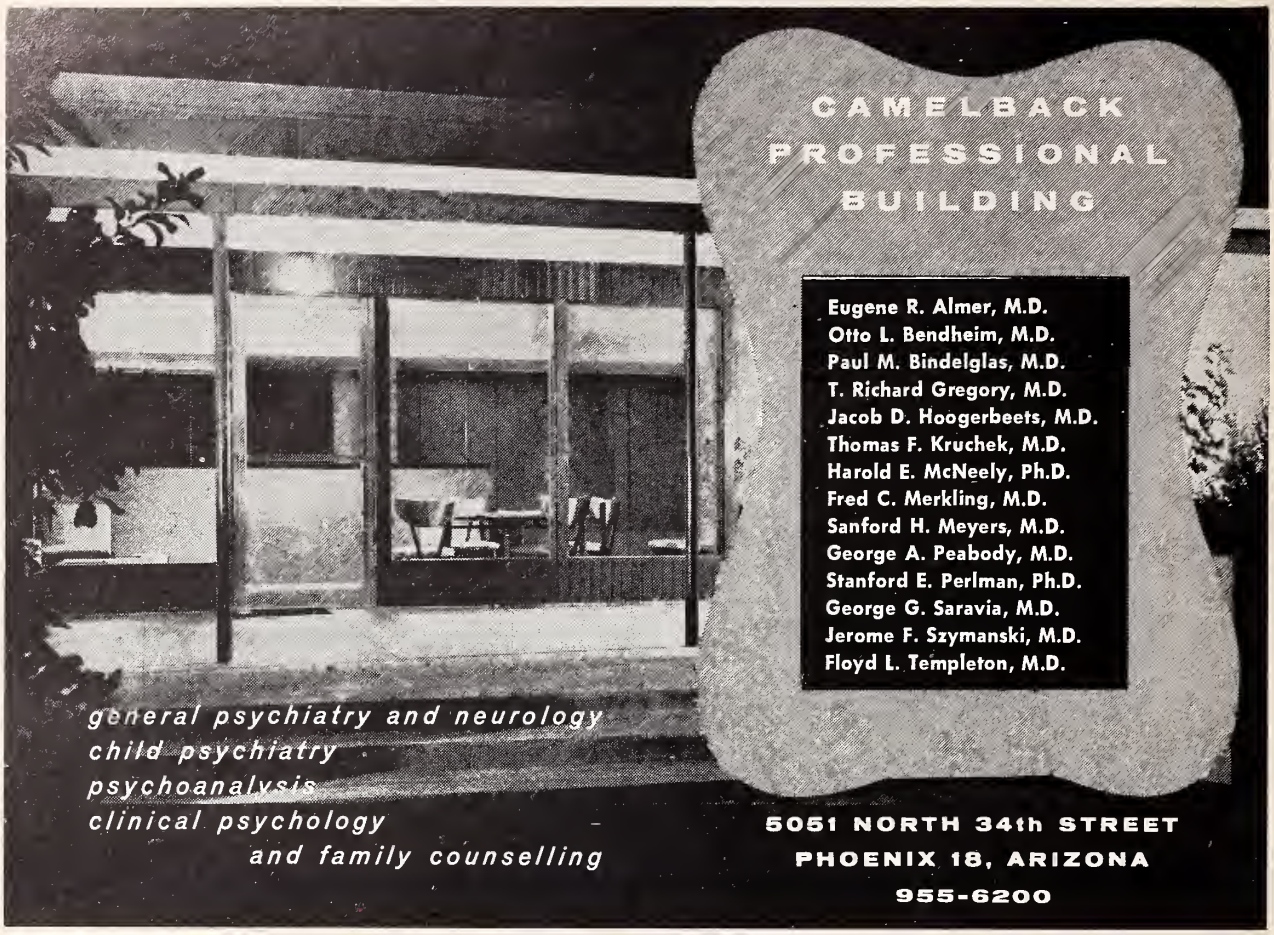
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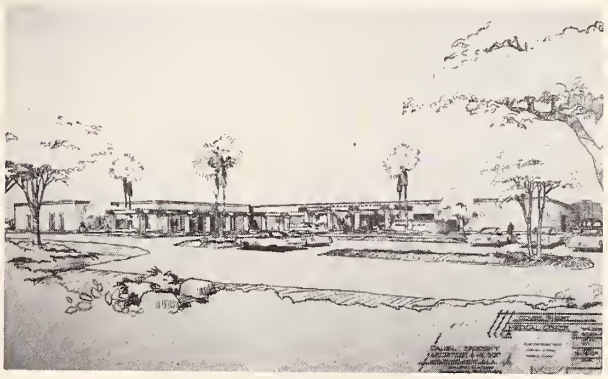
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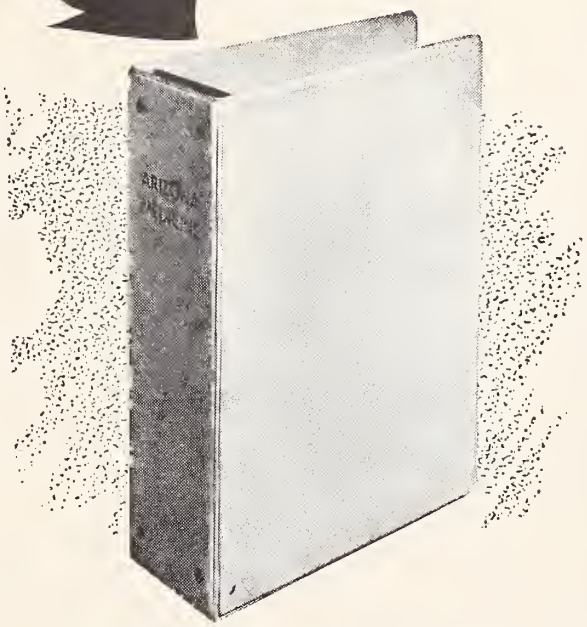
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The ex-Minister of Health in Great Britain is regarded as the world's leading authority on politically controlled medicine. After trying for three years to make the British national health plan work, he now admits it is an inherent failure. He will explain the nature of that failure during the 3-day AAPS meeting in October. In addition, he will examine the whole network of connections between medicine and politics.

Powell has remained close to British politics since leaving his position as Minister of Health, and currently is a member of Parliament, representing an industrial district centering on Wolverhampton, England. He is the author of several books, including *Medicine and Politics.*

AAPS is a voluntary association of private physicians organized to maintain and improve high-quality medical care in the United States. It represents doctors in 1,300 counties and all 50 states. For additional information contact: Mr. Frank K. Woolley, Executive Director, Association of American Physicians and Surgeons, Inc., 230 N. Michigan Ave., Chicago, Illinois 60601.

OCCUPATIONAL HEALTH CONGRESS

The 31st Annual AMA Congress on Occupational will be held at Jackson Lake Lodge in Grand Teton National Park, Wyoming — Aug. 29-30.

For additional information contact: Louis A. Skiera, Asst. Director, Division of Scientific Activities, Dept. of Environmental, Public, & Occupation Health, AMA, 535 N. Dearborn St., Chicago, Illinois 60610.

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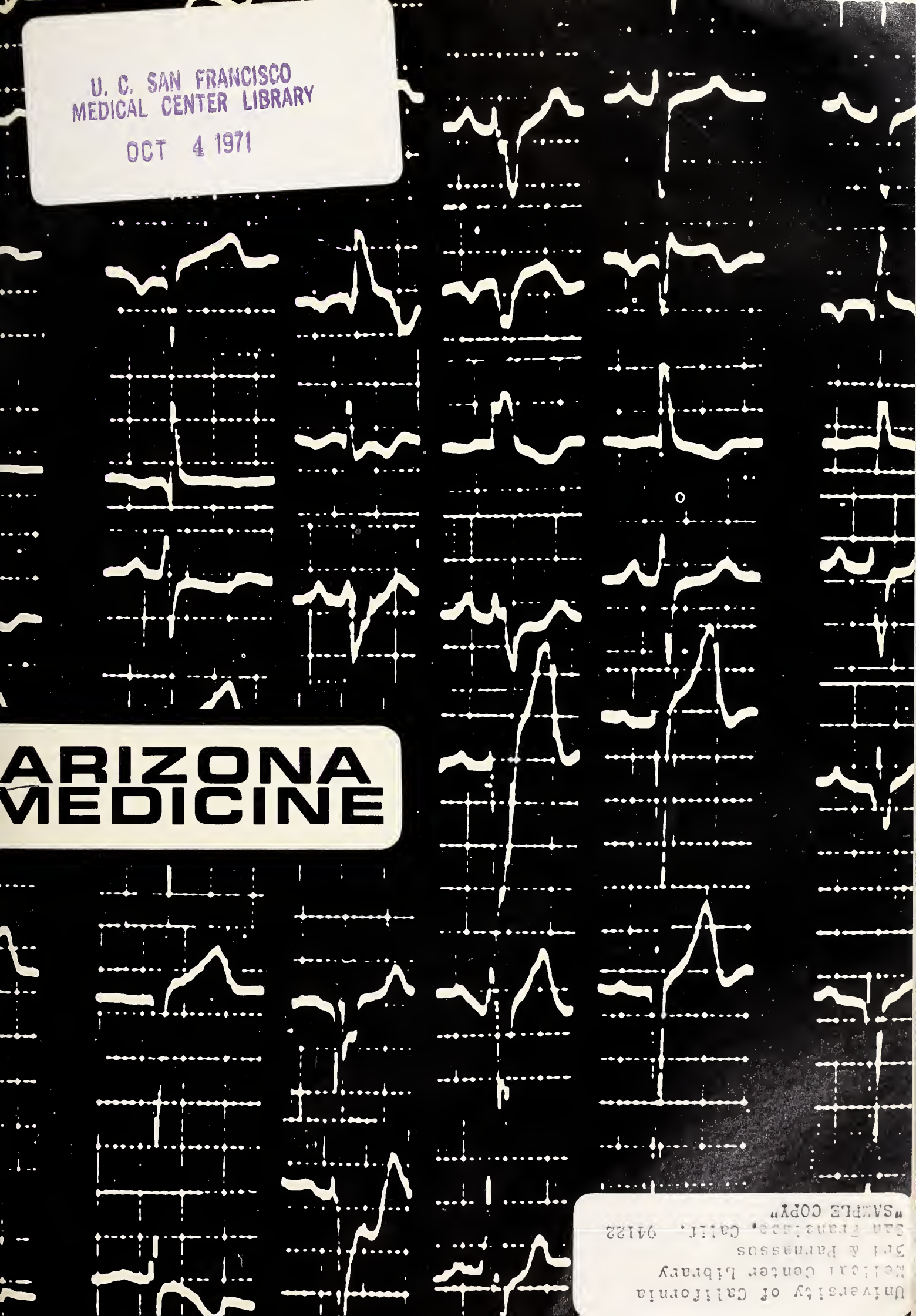
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References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. 3. Belisario, J. C.: *Cutis*, *6*:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, *97*:14, 1968. 5. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and Klein, E.: *Cancer*, *25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

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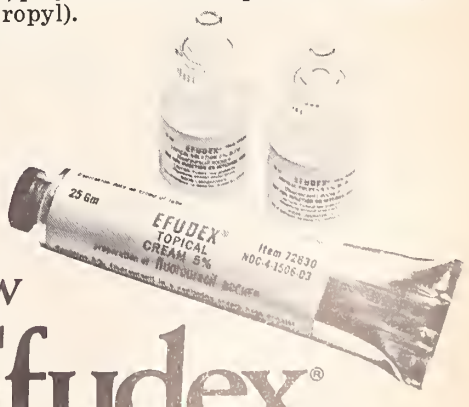
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

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Published monthly by The Arizona Medical Association, Inc., with offices at 810 W. Bethany Home Rd., Phoenix, Arizona 85013. Subscription $5 a year, single copy 50 cents. Second class postage paid at Phoenix, Arizona, and at additional mailing offices.

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THE NIGHT SHIFT OF DEPRESSION...

Depression is a 24-hour-a-day problem... and disturbed sleep is often its nocturnal expression. In fact, such disturbance may be a key symptom in establishing the diagnosis of depression.



WHEN THE DIAGNOSIS IS DEPRESSION

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(AMITRIPTYLINE HCl | MSD)

TABLETS: 10 mg, 25 mg, and 50 mg
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When depression is serious enough to warrant medication, ELAVIL HCl may prove extremely helpful. Unlike psychic energizers or agents that merely elevate mood, ELAVIL HCl embodies a mild antianxiety action which manifests itself even before the fundamental antidepressant activity of the drug becomes evident. Daytime drowsiness occurs in some patients, usually within the first few days of therapy.

NOTE: Not recommended during the acute recovery phase following myocardial infarction. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible. Should not be given to patients who have received an MAOI within two weeks.

Contraindications: Known hypersensitivity. Should not be given concomitantly with or within at least 14 days following the discontinuance of a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl cautiously with gradual increase in dosage until optimum response is achieved. Not recommended during the acute recovery phase following myocardial infarction or for patients under 12 years of age.

Warnings: May block the antihypertensive action of guanethidine or similarly acting compounds. Should be used with caution in patients with a history of seizures or urinary retention, or with narrow-angle glaucoma or increased intraocular pressure. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Safe use during pregnancy and lactation has not been established; in pregnant patients, nursing mothers, or women who may become pregnant, weigh possible benefits against possible hazards to mother and child.

Precautions: When used to treat the depressive component of schizophrenia, psychotic symptoms may be aggravated; in manic-depressive psychosis, depressed patients may experience a shift toward the manic phase, and paranoid delusions, with or without associated hostility, may be exaggerated; in any of these circumstances, it may be advisable to reduce the dose of amitriptyline HCl, or to use a major tranquilizing drug, such as perphenazine, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

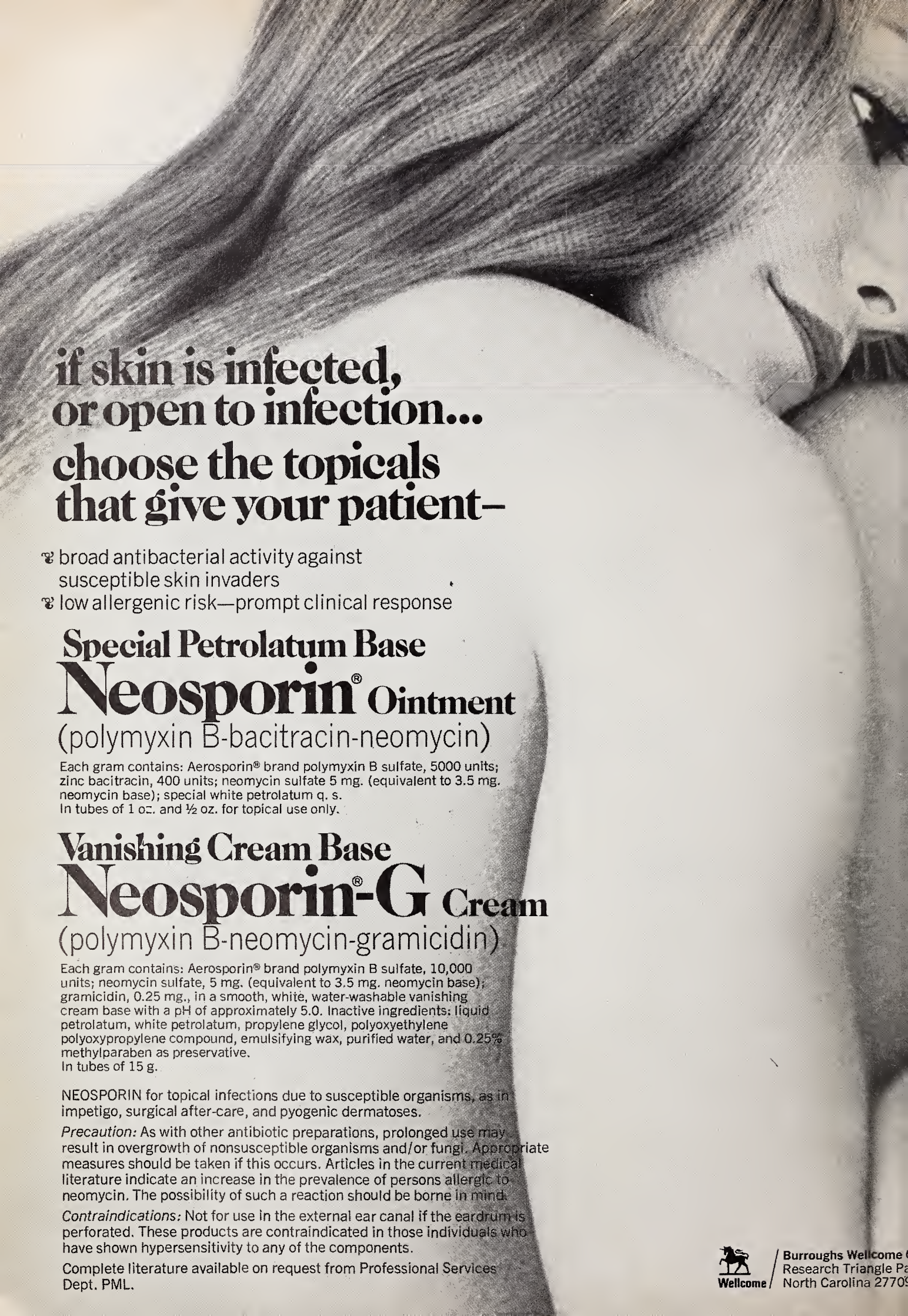
Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.

How Supplied: Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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In tubes of 1 oz. and ½ oz. for topical use only.

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Neosporin®-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

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Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

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Phoenix, Arizona 85013

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

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2. Be guided by the general rules of medcal writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

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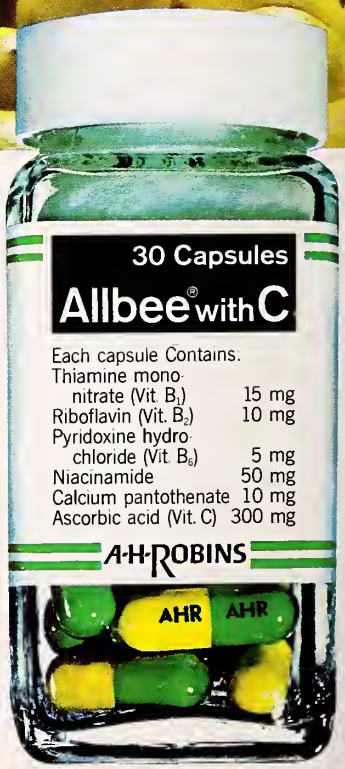


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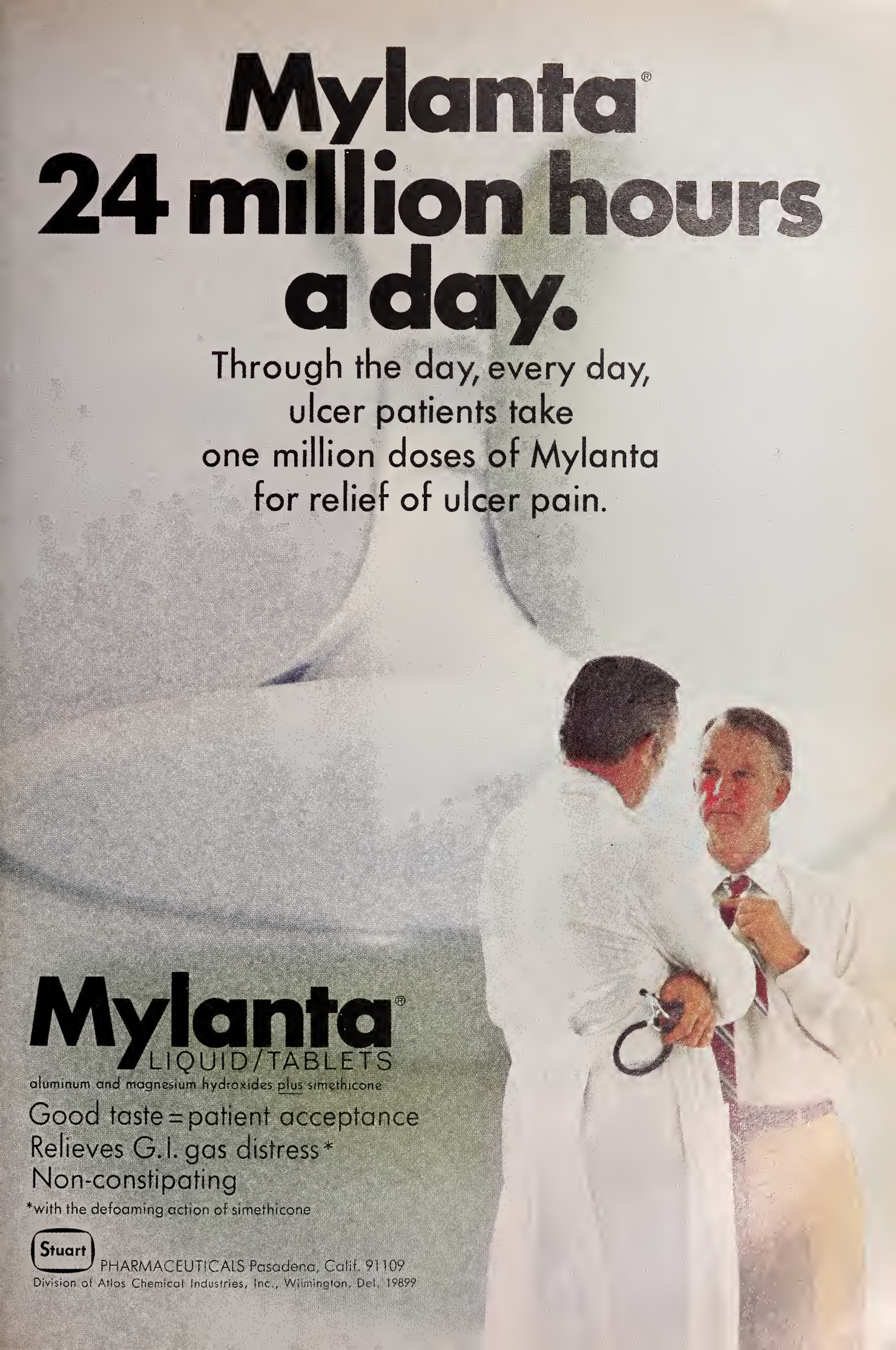
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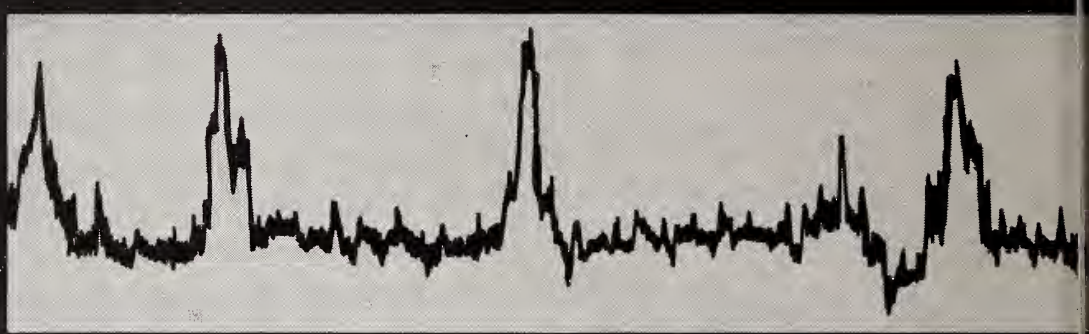
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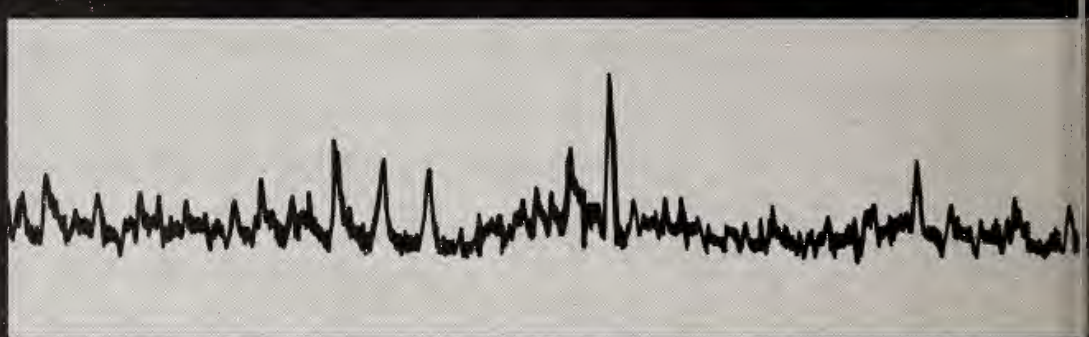
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An intestinal autobiography of rage contentment and horror

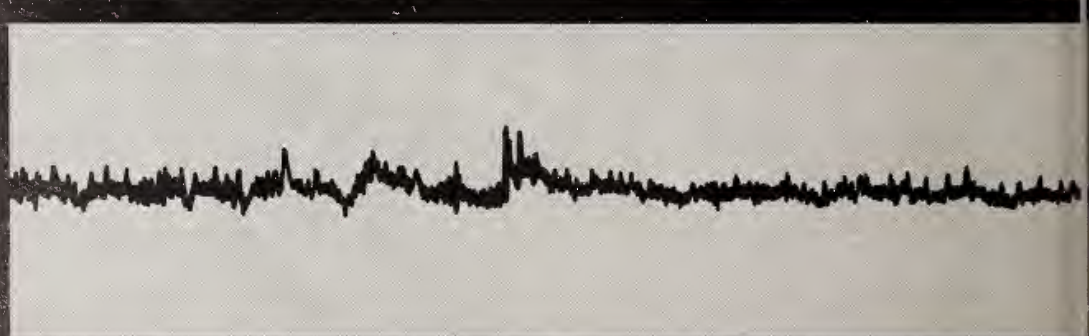
"Feeling unfairly taxed by the government (Internal Revenue Service) and not given enough attention by A.U.O. [an experimenter to whom the subject became very attached], he became overtly critical and accusatory. He shouted, raged, and threatened to quit."*



"The motility that day was quiet. This type of recording is seen regularly when he is relaxed and contented and the laboratory seems peaceful."*



He was overwhelmed by "paralyzing horror" when told he would need a partial laryngectomy for removal of an early carcinoma; "... the activity of the ileum virtually ceased for over a five-minute period...."*



Background

*Data presented here derive from a 13-year ongoing study by Henry Harrison Sadler, M.D., and Aline Underhill Orten, Ph.D., at Wayne State University. Their findings, which demonstrate a correlation between the emotional state of a human subject and the motility of an isolated segment of his ileum, were published in the April, 1968, *American Journal of Psychiatry,* volume 124, page 1375.

The subject is a 56-year-old man with a 40-
Thiry loop of ileum created as a result of
emergency surgery. A person of modest
attainment and simple tastes, the subject
depends on the investigators as he might hi
own family. His full-time job is as a "human
laboratory," and throughout the 13-year pe
of the study, he has taken great personal pr
in his own participation.

A story charged with emotion

The graphs on the facing page are intestinal motility readings on a human subject experiencing the emotions of rage, contentment and horror (see "Background" below left). This "intestinal autobiography" dramatizes the point that certain emotions correlate with specific patterns of G.I. motility.

The visceral clutch and functional G.I. disorders

The gut response to stress has been amply demonstrated in many functional G.I. disorders. Nervous diarrhea and irritable colon syndrome, for example, are disorders associated with abnormal G.I. motility. And these disorders are commonest among patients sensitive to life-stress situations productive of conflict and excessive anxiety.

Librax® calms anxiety, calms the gut

In these areas of G.I. pathology, Librax has become a mainstay of adjunctive therapy. Reason? Effective two-way calming action. Librax, by relieving excessive anxiety, not only helps calm emotional overreaction to stress, it controls intestinal hypermotility, too. Depend on Librax—the only drug that combines the well-known antianxiety action of Librium® (chlordiazepoxide HCl) and the potent, dependable antisecretory/antispasmodic action of Quarzan® (clidinium Br).

1 or 2 capsules, 3 or 4 times daily in the treatment of nervous diarrhea and irritable colon syndrome

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

In functional G.I. disorders, adjunctive Librax®

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Adults: 225 mg. q.i.d.
Children: 10 mg./lb./day in 4 equally divided doses.
The recommended dosage for Versapen (hetacillin) does not depend on site of infection, but on severity. Therefore, in mild-to-moderate infections due to susceptible organisms, you can prescribe Versapen (hetacillin) for the genitourinary tract at the same dose recommended for the respiratory tract. Or any other infection site.

2/ A low dosage for mild-to-moderate genitourinary infections due to susceptible organisms.

3/ A low dosage for mild-to-moderate pediatric infections due to susceptible organisms.

4/ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin.

5/ Lower patient cost. Inherent with lower dosages for many indications is the benefit of lower cost to the patient. And, in these many instances, Versapen is significantly more economical to the patient than ampicillin brands.

Side Effects. As with any penicillin serious allergic reactions, including anaphylaxis, can occur. The type of side effects most frequently encountered are the same as with ampicillin, namely: diarrhea, loose stools, rash and nausea.

Please see next page for brief summary of prescribing information.

BRISTOL

Versapen® (hetacillin)
Versapen®-K (potassium hetacillin)

■ Versatile dosage forms...for all patients...of all ages. ■ A uniform adult and a uniform pediatric dosage for all susceptible mild-to-moderate infections...respiratory, genitourinary, G.I., skin and soft tissue. Recommended dosage varies with severity, not site, of infection. ■ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin. ■ Economical therapy.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
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For complete information, consult Official Package Circular.

Actions: Hetacillin provides bactericidal levels of ampicillin but has no antibacterial activity itself. It hydrolyzes to ampicillin and has a half-life of 20 minutes at pH 7.1.

Indications: Hetacillin is indicated in the treatment of susceptible strains of the following organisms in the diseases listed. Bacteriology studies to determine the causative organisms and their sensitivity should be performed. Therapy may be instituted prior to obtaining results of sensitivity testing.

Group A beta-hemolytic Streptococcus: Tonsillitis, pharyngitis, otitis media, skin and soft tissue infections.

Diplococcus pneumoniae: Broncho- and lobar pneumonia, otitis media.

Nonpenicillinase-producing *Staphylococcus aureus:* skin and soft tissue infections, otitis media.

H. influenzae: Bronchitis and bronchopneumonia.

Escherichia coli: Cystitis, pyelonephritis, prostatitis/urethritis, skin and soft tissue infections.

Proteus mirabilis: Cystitis, pyelonephritis, skin and soft tissue infections.

Enterococcus (*Streptococcus faecalis*): Cystitis, pyelonephritis, prostatitis/urethritis.

Shigella species: Shigellosis.

Salmonella species: Salmonellosis (parenteral only).

Indicated surgical procedures should be performed.

Use parenteral drug only in severe infections or in patients unable to take oral medications.

Contraindications: A history of allergic reactions to penicillins or lidocaine.

Warning: Anaphylaxis may occur, particularly after parenteral administration and especially in patients with an allergic diathesis. Check for a history of allergy to penicillins, cephalosporins or other allergens. If an allergic or anaphylactic reaction occurs, discontinue hetacillin and institute appropriate treatment.

Usage in Pregnancy: Safety for use in pregnancy is not established.

Precautions: Mycotic or bacterial superinfections may occur. Assess renal, hepatic and hematopoietic function periodically during long-term therapy. Because intravenous administration of potassium hetacillin in doses in excess of 5 mg./Kg. has been noted to enhance the vasopressor effect of epinephrine in dogs, precautions should be taken with patients receiving epinephrine concurrently.

Adverse Reactions: Untoward reactions include: Glossitis, stomatitis, black "hairy" tongue, nausea, vomiting and diarrhea, skin rashes, urticaria, exfoliative dermatitis, erythema multiforme and anaphylaxis (usually with parenteral administration). Anemia, thrombocytopenia, thrombocytopenic purpura, eosinophilia, leukopenia, and agranulocytosis have been noted, are usually reversible and are believed to be hypersensitivity phenomena.

Elevations in one or more liver function tests have been reported without any evidence of hepatic toxicity.

Local reactions: Thrombophlebitis at the site of intravenous injection has been reported.

Usual Dosage: Patients weighing 90 lbs. or more: 225 mg. q.i.d. Patients weighing less than 90 lbs.: 2.5 mg./lb. q.i.d.

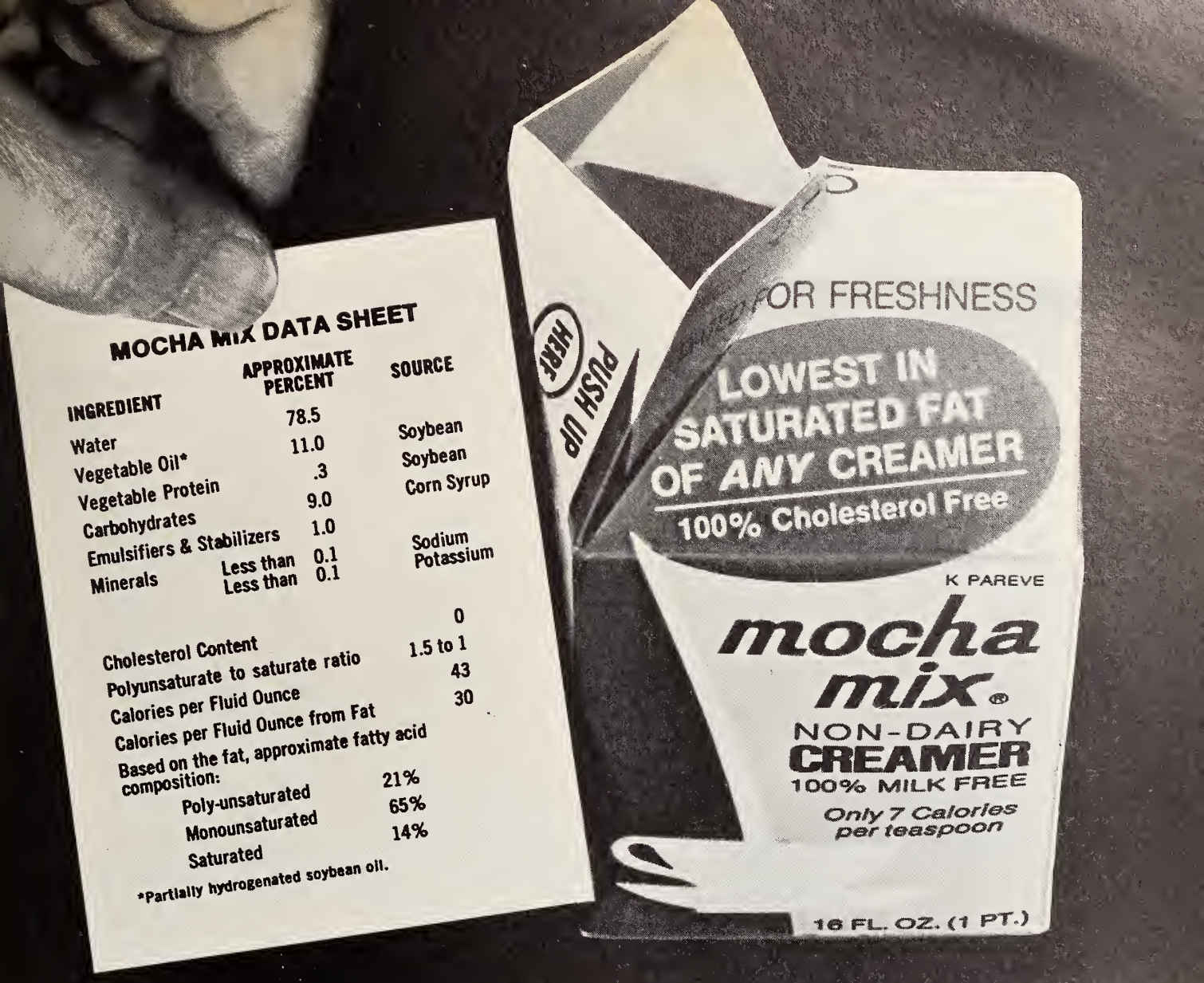
Group A beta-hemolytic streptococcal infections should be treated for at least 10 days. Administer oral preparations in a fasting state to insure maximum absorption.

Recommended dosages (expressed in terms of ampicillin activity) in susceptible mild-to-moderate infections*

Versapen® (hetacillin) **112.5 mg.**	Chewable Tablets	*Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: one tablet *q.i.d.*
	Oral Suspension (112.5 mg./5 ml.)	*Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: 1 tsp. *q.i.d.* Available in 40 ml., 80 ml., and *new* 100 ml. bottles.
	Pediatric Drops (112.5 mg./ml.)	*Usual dosage:* 10 mg./lb./day in 4 equally divided doses. For a 10 lb. child: ¼ dropper *q.i.d.* Available in 10 ml. bottles.
Versapen®-K (potassium hetacillin) **225 mg.**	Capsules	*Usual adult dosage:* one 225 mg. capsule *q.i.d.*
	I.V. I.M. with Lidocaine HCl (20 mg./vial)	*For patients weighing 90 lbs. or more:* 225 mg. *q.i.d.* *For patients weighing less than 90 lbs.:* 10 mg./lb./day in 4 equally divided doses.

*For severe infections—Adults: 450 mg. *q.i.d.* Children up to 90 lbs.: 20 mg./lb./day in 4 equally divided doses. Very serious infections may require very high doses and prolonged therapy. *Note:* Versapen® has been issued Patent No. 3198804.

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ontraindications: Concurrently with MAO inhibitors, in patients hypersensitive to is drug; in emotionally unstable patients susceptible to drug abuse.

Varning: Although generally safer than the amphetamines, use with great caution in atients with severe hypertension or severe cardiovascular disease. Do not use dur-ng first trimester of pregnancy unless potential benefits outweigh potential risks.

dverse Reactions: Rarely severe enough to require discontinuation of therapy, un-leasant symptoms with diethylpropion hydrochloride have been reported to occur n relatively low incidence. As is characteristic of sympathomimetic agents, it may ccasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include anes such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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References: 1. Batterman, R. C., and Grossman, A. J.: Fed. Proc. *14*:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970. 3. Vickers, F. N.: Gastroint. Endosc. *14*:94, 1967. 4. Mielke, C. H., Jr., and Britten, A. F. H.: New Engl. J. Med. *282*:1270, 1970 (Corresp.). 5. Kestler, O. C., and Gyurik, J.: Industr. Med. Surg. *21*:372, 1962. 6. Forster, S., et al.: Amer. J. Orthop. *2*:285, 1960. 7. Data on file, McNeil Laboratories, Inc. 8. Friend, D. G.: Clin. Pharmacol. Ther. *5*:871, 1964.

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gastritis



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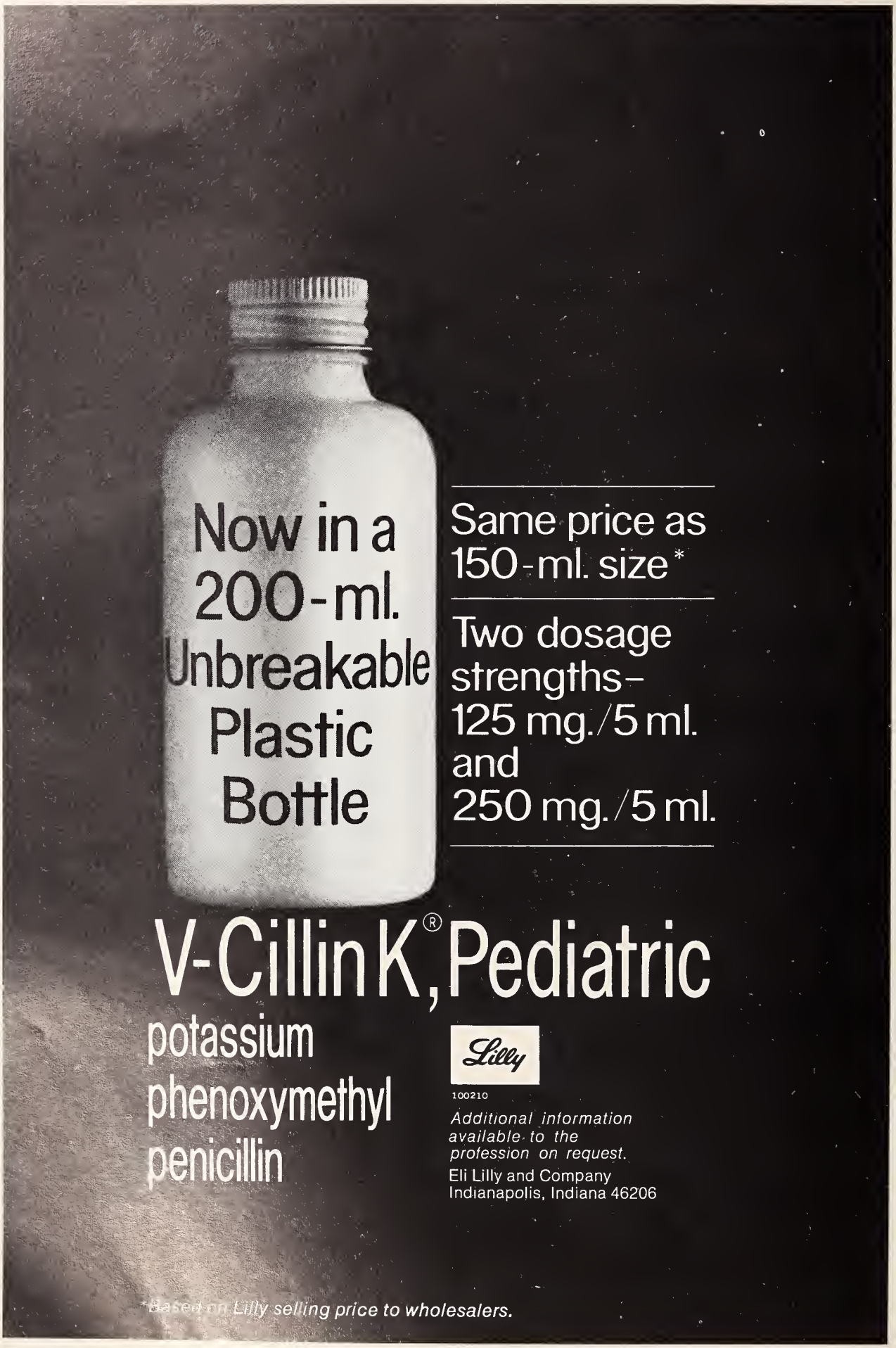
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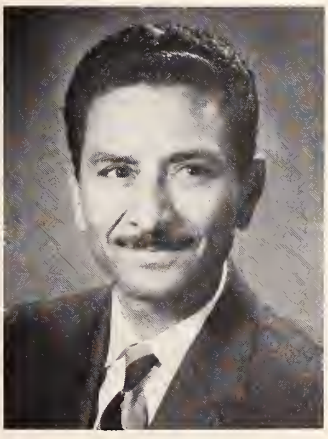
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INTERMITTENCY OF BUNDLE BRANCH BLOCK IN ACUTE MYOCARDIAL INFARCTION

Coronary care units have decreased the mortality of patients with acute myocardial infarction, principally because warning arrhythmias have been recognized and treated and ventricular fibrillation thereby prevented. Further decreases in mortality will occur when the warning electrocardiographic abnormalities of impending heart block are recognized and temporary pacemakers prophylactically inserted. The experience of Dr. Zaky, presented in this article, is similar to that encountered in other coronary care units throughout the country.



ADIB ZAKY, M.D.
V.A. Hospital
PHOENIX, ARIZONA

SUMMARY

Complete heart block developing suddenly after bundle-branch conduction defects is reported in two cases of acute anterior myocardial infarction. It is stressed that the initial bundle-branch conduction defects can be extremely transient and intermittent and, therefore, may be missed. It is suggested that the lead used for continuous electrocardiographic monitoring be appropriate for the recognition of bundle-branch blocks. The use of a V_6 - V_1 lead has been found suitable for this purpose as well as for displaying the P wave. It is further suggested that the development of complete block should be anticipated by demand pacing in cases of: (1) con-

duction defect involving two of the three divisions of the bundle of His, and, more urgently, (2) Mobitz type II second degree block.

Conduction defects at the level of the bundle (of His) branches may progress to complete heart block. The onset of complete block in such cases is usually sudden, and is characterized by a slow unstable idioventricular pacemaker and a liability to Adams-Stokes attacks.[1-5] Interest in this infranodal variety of block has been stimulated by the advent of intensive coronary care.[6-9] In cases of acute myocardial infarction, it is important to recognize the complication of bundle branch block, and to follow its course closely. This communication seeks to stress the marked intermittency and other special features of infranodal conduction defects during the acute stage of myocardial infarction.

PATIENT SUMMARIES

Patient 1.—A. M., 61 year old white man, was admitted on May 22, 1969 at 1:00 p.m. with the clinical picture of acute myocardial infarction. He had suffered a previous anterior infarction in 1962. Since that time, the patient had had repeated attacks of chest pain requiring admission, and diagnosed as coronary insufficiency. An electrocardiogram (ECG) taken prior to the present admission and dated December 26, 1968 is shown in Figure 1A. The monitor pattern and a conventional ECG taken at 3:00 p.m. on the day of the present admission are shown in Figure 1B. The initial r wave in V_1 and V_2 and the q wave in Leads I, V_4 and V_6 had decreased markedly or disappeared altogether. These changes were interpreted as suggesting an acute anteroseptal myocardial infarction. The frontal axis had shifted slightly to the left from its position in the previous tracing. Shortly after admission, the monitor QRS pattern periodically became negative. A regular ECG taken during the negative phase showed the changes of right bundle branch block and was also suggestive, but not characteristic, of left superior fascicular block (Fig 1C, 3:30 p.m.). Still later the same day, the positive QRS monitor pattern periodically displayed a slur on the downstroke of the R wave. A regular ECG showed the development of advanced left bundle branch block with left axis deviation (Fig. 1D, 6:00 p.m.). The next day, another ECG taken during apparent normal conduction in the monitor pattern revealed the characteristic changes of isolated left superior fascicular block (Fig. 1E). These changes included "true left axis deviation" between —30° and —90°, an initial downward and a terminal upward vector, and apparent counterclockwise rotation of the frontal loop.[10] The monitor pattern continued to indicate intermittent changes between these various conduction defects, and the question arose whether to place the patient on demand pacing. But, since, at that time, combined bundle branch conduction defects had not been clearly recognized in the literature as

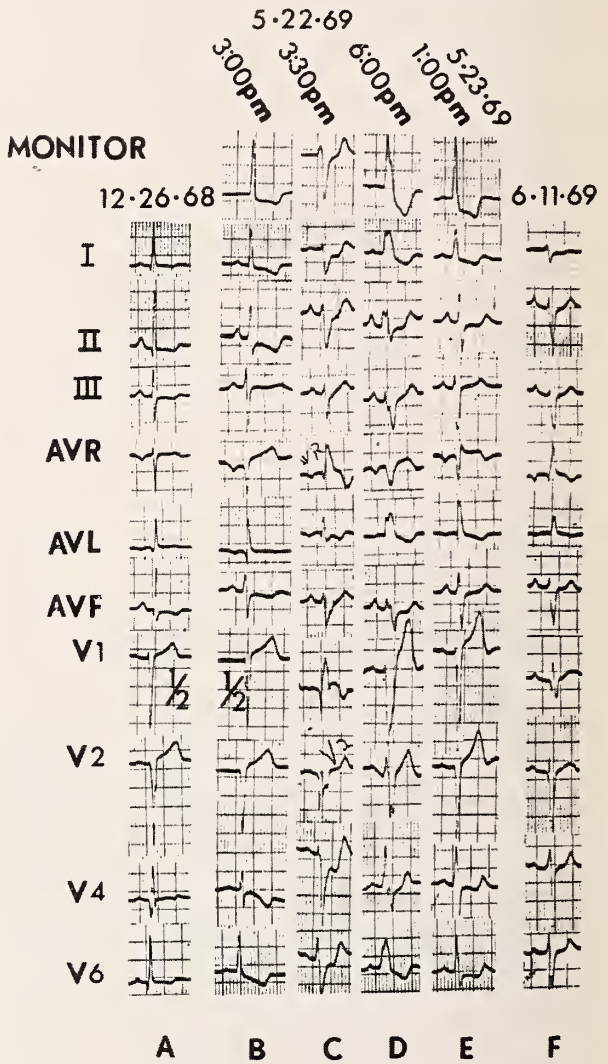


Figure 1
Case 1. A. Baseline ECG before the present study showing old anterior infarction. B-E. Serial electrocardiographic monitor patterns (upper panel) and corresponding conventional ECGs, showing probable acute anteroseptal infarction and intermittent bundle-branch conduction defects preceding the complete block. The defect involves the right branch and, possibly, the left superior fascicle in C, both left fasciculi in D, and the left superior fascicle only in E. F. ECG recorded after recovery from complete block. This ECG pattern persisted until the patient's demise. Conventional ECGs standardised 10 mm to 1 millivolt. Lead V_1 in A and B: ½ standard. All tracings recorded at a speed of 25 mm per second. (one large division = 5 mm).

an indication for pacing, it was decided to wait. Early the next day, May 24, 1969 at 1:30 a.m., a transient episode of complete heart block was documented (Fig. 2A). Sinus rhythm returned spontaneously, together with the intermittent bundle branch conduction defects previously described (Fig. 2B). Later at 4:12 p.m., an episode of 2:1 A-V block was recorded, probably of Mobitz type II in view of the preceding and subsequent records (Fig. 2C). At this point, it was decided to insert a semi-floating transvenous pacing electrode and to place the patient on demand pacing. The next day, May 25, 1969, the pacemaker was found to be functioning on a more or less continuous basis. Temporary turning off of the pacemaker revealed that the patient was in complete block (Fig. 2D). During the following few days, the monitor pattern continued to show pacing alternating with sinus rhythm at a faster rate, the sinus rhythm gradually becoming more prevalent. Eventually, sinus rhythm became established, and the pacing electrode was removed on June 4, 1969. On recovery from the complete block, the patient had a persistent conduction defect consistent with incomplete right bundle branch and possible left superior fascicular block (Fig. 1F). After a long hospital stay punctuated by episodes of congestive heart failure, the patient was discharged on August 11, 1969. He was readmitted after one week in recurrent heart failure and suspected pulmonary embolism. His condition continued to deteriorate relentlessly until his demise on October 12, 1969. Autopsy showed extensive fibrosis of the septum and the anterior wall of the left ventricle. There were several small infarctions in the left lung, marked fibrosis of the right lung, and evidence of severe congestive heart failure.

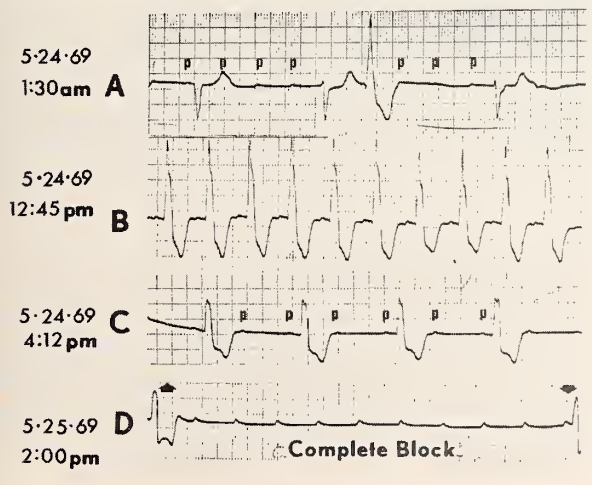


Figure 2
Case 1. Serial rhythm changes recorded during eontinuous monitoring. A. Transient episode of complete block. B. Sinus rhythm with advanced left bundle-branch conduction defect. C. 2:1 A-V block without significant change in the P-R interval, and D. Complete block with failure of the idioventricular mechanism. Patient was being paced; pacer turned off between arrows.

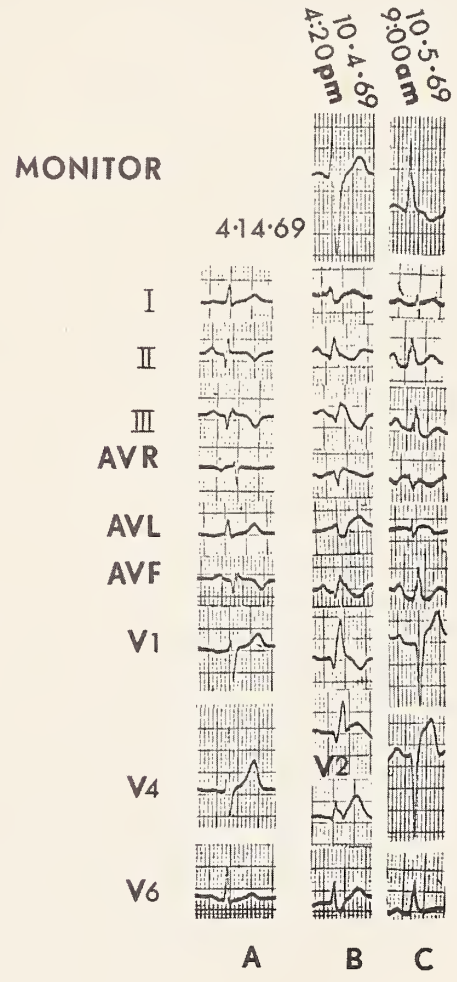


Figure 3
Case 2. A. Baseline ECG before the present study showing old inferior infarction. B. and C. Two monitor patterns and corresponding conventional ECGs showing acute anterior infarction and intermittent bundle-branch coduction defects preceding complete A-V block. Defect probably involves right branch and left inferior fascicle in B and left inferior fascicle only in C. Conventional ECG in C recorded at double standard: 20 mm to 1 millivolt.

Patient 2.—I. N., 53 year old white man, was admitted on October 4, 1969 with the clinical picture of acute myocardial infarction. The last ECG recorded prior to the present admission and dated April 14, 1969 (Fig. 3A) showed evidence of a previous inferior wall infarction sustained in March of 1969. The monitor pattern

on the present admission (Fig. 3B) showed a predominantly negative QRS complex, and the conventional ECG showed early ST segment changes suggestive of an anterior infarction as well as a newly developed conduction defect. In addition to a classical right bundle branch block, the frontal axis had become inferiorly directed, and the q wave in II, III and a VF had become small and narrow. In addition, the R wave in these leads was distinctly slurred, and its amplitude had increased relative to the previous ECG. These changes have been described as indicating a block of the left inferior fascicle.[10-13] It should be mentioned, however, that rected, and the q wave in II, III and aVF had be a "normalized" q wave, residual from the previous inferior infarction. Following admission, the monitor pattern alternated between positivity and negativity. A conventional ECG taken the next day during a positive phase showed the disappearance of right bundle branch block. The left inferior fascicular block persisted, although now it was accompanied by evidence of extensive anterior necrosis (Fig. 3C). About 7:45 p.m. the same day, the patient suddenly lost consciousness and developed a seizure, from which he recovered spontaneously. The monitor pattern documented the temporary disappearance of ventricular activity during this episode (Fig. 4A). It was then decided to resort to artificial pacing. The semi-floating electrode entered the ventricle without difficulty, but the procedure was interrupted by two further Adams-Stokes attacks, during which external cardiac massage was performed. On the institution of demand pacing, it was apparent that the rhythm alternated between sinus tachycardia of about 120 - 140 per minute and paced beats at the preset rate of 80 per minute. It was also noticed that a negative monitor pattern similar to that shown in Figure 3B had become permanent during sinus rhythm, indicating that the combined right branch and left inferior fascicular block had probably become established. The arrhythmia was further analyzed by temporarily turning off the pacemaker during episodes of sinus rhythm. On a single occasion, the rhythm changed from sinus to 2:1 A-V block before changing to complete block (Fig. 4B). Usually, however, the change was from sinus tachycardia directly to complete heart block, either with the establishment of an idioventricular rhythm (Fig. 4C), or with failure of this mechanism to

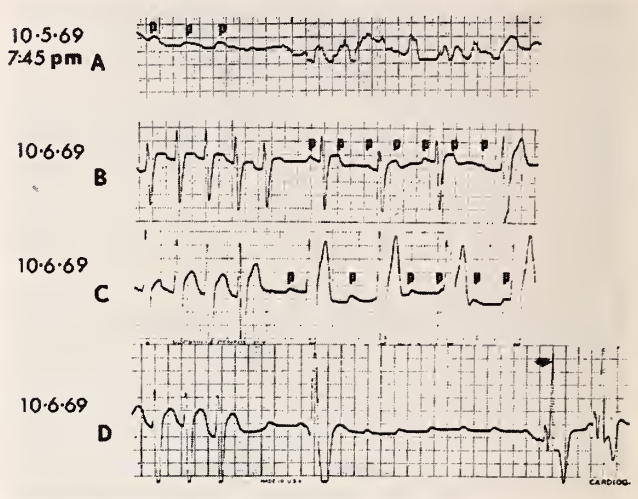


Figure 4
Case 2. Serial rhythm changes recorded during continuous monitoring. A. Complete heart block recorded during Adams-Stokes attack of sudden onset. B. Spontaneous abrupt change from sinus rhythm to 2:1 A-V block without significant change in P-R interval and then to complete block. C. Spontaneous abrupt change from sinus rhythm directly to complete block with idioventricular rhythm, and D. Abrupt change from sinus rhythm to complete block with failure of idioventricular mechanism. A single escape beat is seen. Artificial pacer turned on at arrow.

take over and ventricular standstill (except for a single escape beat, Fig. 4D). These changes in rhythm were abrupt, and took place from one beat to the other as shown in the illustration. By the morning of October 7, 1969, the complete A-V block had become permanent. Meanwhile, the patient developed a progressive state of shock and expired on October 8, 1969 at 11:00 a.m. Autopsy showed recent occlusion of the anterior descending branch of the left coronary artery and old occlusion of the right coronary artery. There was massive involvement of the myocardium of the left ventricle with old and recent infarction, the latter involving a major part of the septum.

COMMENTS

According to recent reports, the bundle of His ends in three functionally distinct divisions: a right branch, a left superior (anterior) fascicle, and a left inferior (posterior) fascicle.[11, 14, 15] Interruption of conduction in any one or combination of two of these divisions is believed to result in a distinct electrocardiographic pattern. Most of these patterns are seen in Figures 1 and 3, and are discussed in the Patient Reports. A combined conduction defect involving two of the divisions carries a relatively high risk of developing into complete heart block.[4, 12, 16] Second

degree A-V block Mobitz type II indicates intermittent involvement of the third division,[17] and imminent complete block.[3] In acute myocardial infarction, the conduction defect runs an accelerated course, from single bundle branch block to complete block usually in not more than 3 or 4 days.[6] The progress of the conduction defect is characterized by marked intermittency at all stages, a point well illustrated in this report. Because of this intermittency, it is conceivable that the true nature of the conduction defect may be missed in serial ECGs, and even during continuous ECG monitoring unless an approprite lead is used. It is possible, therefore, that at least some of the cases labelled "primary" ventricular standstill[18] are in reality cases of infranodal complete heart block developing suddenly from sinus rhythm. The role of continuous ECG monitoring in the detection of intraventricular conduction defects, surprisingly enough, has rarely been stressed. In the present study, and in over 300 other cases to date, the monitor leads have been placed in the V_6 and the V_1 positions. The resulting ECG pattern normally consists of positive components (P, QRS and T). It combines the value of the two unipolar leads for recognizing bundle branch blocks, in addition to displaying a good P wave. Further, the electrodes do not interfere with routine cardiac examinations, nor with the application of the paddles should the occasion for defibrillation arise. Similar advantages have been independently claimed for a modified CL_1 lead.[19] The definitive diagnosis of a single or combined bundle branch block, however, requires a conventional ECG. Since multiple lead monitoring is not generally available at the present time, it is suggested that a 12 lead ECG be recorded whenever the monitor pattern shows any change in the QRS complex (Fig. 1 and 3), and at least daily during the first 4 days after the onset of acute myocardial infarction.

The present report confirms that infranodal block usually complicates anterior myocardial infarction and usually carries a serious prognosis.[8, 20] It also suggests that the indications for prophylactic standby pacing are: (a) a combined conduction defect involving two of the divisions of the bundle of His, and, more urgently, (b) second degree A-V block Mobitz type II.[21] A distinction should be made, however, from Mobitz type I (Wenchebach) with variable P-R interval. Mobitz type I A-V block is seen more often as a complication of inferior myocardial infarction. It occurs during the course of the nodal variety of heart block, and is believed to be of less serious import.[8]

ACKNOWLEDGMENT

The author wishes to thank Dr. Stanley Crosbie, Director of the Veterans Administration Hospital, Phoenix, Arizona for permission to publish this report.

ADDITIONAL INDEXING WORDS

Bilateral bundle branch block
Infranodal block
Mobitz type II block
Monitor ECG Lead
Prophylactic pacing
Trifascicular block

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ATRIAL FIBRILLATION AND PULMONARY

The increasing prevalence of illicit drug usage makes the knowledge of the various complications of drug abuse extremely important. In this pertinent and timely article, the authors point out the need to suspect heroin overdose in young, comatose people presenting with both pulmonary edema and atrial fibrillation.

Although pulmonary edema is a relatively common finding in acute heroin poisoning, atrial fibrillation seems to be rare. Only six cases of atrial fibrillation related to heroin intoxication have been reported in the literature.[1] Both findings, occurring together in a young comatose patient should suggest this diagnosis.

Two patients with acute heroin intoxication associated with pulmonary edema and atrial fibrillation were seen at the emergency rooms of our hospitals.

CASE REPORTS

1. A 21 year old white man was brought to the emergency room at Tucson Medical Center in profound coma. No history was available.

Physical Examination: He was markedly cyanotic and several needlemarks were seen on both forearms. His pupils were constricted, the blood pressure was unobtainable, the apical pulse rate was absolutely irregular at a rate of about 130/minute, and he was apneic.

He was immediately intubated and ventilated. Following intubation, auscultation of the lungs revealed generalized moist bubbling rales bilaterally and the patient produced foamy, pink sputum requiring frequent suctioning of secretions. Nalorphine, 7.5 mg., was given intravenously. After 15 minutes shallow spontaneous respirations appeared but the patient remained comatose for the next 16 hours. The electrocardiographic monitor at the time of admission showed atrial fibrillation with an uncontrolled ventricular response. (Fig. 1) After one hour the rhythm converted to sinus tachycardia. The chest x-ray showed severe pulmonary edema. (Fig. 2) Initial arterial blood gas studies showed a pO_2 of 35 mm Hg, pH of 7.0 and pCO_2 of 47 mm Hg. The patient later developed bronchopneumonia and was treated with cephalothin. He recovered completely after two weeks. The chest x-ray and blood gases were normal on discharge.

2. A 17 year old Mexican-American male was brought to the emergency room at Pima County General Hospital, comatose and in respiratory arrest. No history was available.

Physical Examination: He was cyanotic, a needle mark was detected at the right antecubital fossa and the pupils were constricted. The blood pressure was 90/60, and the pulse rate was 110/minute and absolutely irregular.

He was intubated and put on a respirator. Auscultation of the lungs showed moist rales at both lower lung fields and scattered rhonchi over the midlung areas.

After 20 minutes he awakened and improved to a point where he could be extubated. No narcotic antagonists were given.

The initial electrocardiogram taken 10 minutes after intubation showed atrial fibrillation with a ventribular response rate of approximately 110/minute. (Fig. 3) The atrial fibrillation spon-

Reprint requests: Dr. Gann, Medical Resident, Tucson Hospitals Medical Education Program. Dr. Mansour is Chief, Medical Service, Pima County General Hospital. Dr. Crosby is Chairman, Department of Internal Medicine, Tucson Hospitals Medical Education Program.

EDEMA IN ACUTE HEROIN INTOXICATION

DIETMAR GANN, M.D.
NICK MANSOUR, M.D.
DAVID J. CROSBY, M.D., FCCP

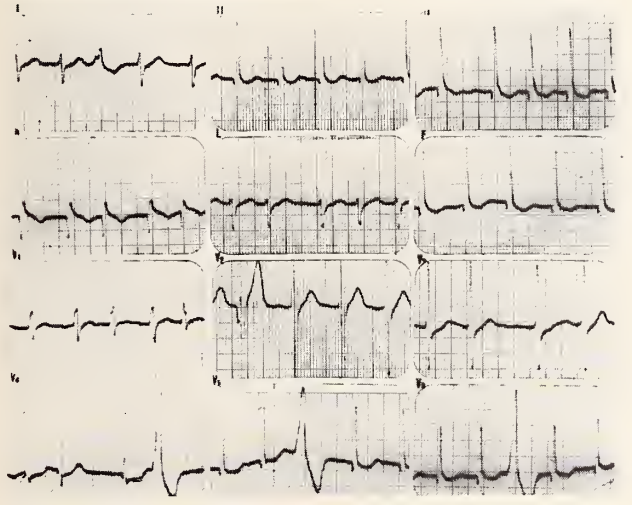


Figure 1
Atrial fibrillation with uncontrolled ventricular response.

taneously converted to normal sinus rhythm after four hours. The chest x-ray at the time of admission showed pulmonary edema. (Fig. 4) The patient had an uneventful recovery and was discharged to his home after three days of hospitalization.

DISCUSSION

Although the pathogenesis of pulmonary edema in heroin intoxication remains obscure, several hypotheses have been suggested.[2-3] One possibility is that the injected material causes a hypersensitivity reaction. Sudden death after intravenous injection of heroin might be explained by this mechanism, but there is no definite evidence that hypersensitivity reactions produce pulmonary edema.[4] A neurogenic cause has been postulated by others since various central nervous disorders, such as meningitis, brain tumor, subarachnoid hemorrhage may be associated with pulmonary edema.[5] Usually the lesion is situated near the third ventricle. Experimental application of drugs such as aconitine to this region can induce pulmonary edema in animals, the appearance of which can be prevented by sympathetic blockage.[6] Another theory considers hypoxia itself to be the cause of pulmonary edema, since the edema usually subsides soon after nalorphine administration and vigorous ventilation.

Heroin is metabolized to morphine in the



Figure 2
Chest X-ray shortly after admission shows severe pulmonary edema.

body, which inhibits the hydrolysis of acetylcholine by both acetylcholinesterase and pseudocholinesterase and therefore increases vagal tone.[7] Morphine also acts indirectly on the heart by stimulation of the vagal centers.[8] It also causes diminution in alveolar ventilation by a reduction in respiratory rate[9] and tidal volume[10] and therefore may cause hypoxia. Experimental and clinical observations have shown that hypoxia predisposes the heart to arrythmias.[11] In the dog, perfusion of the coronary arteries with anoxemic blood after small doses of Mecholyl caused atrial fibrillation. Mecholyl alone did not cause atrial fibrillation.[12] Thus, atrial fibrillation in patients with heroin poisoning is thought to be caused by a synergistic action of hypoxia and increased vagal tone. The clinical courses of our two patients support the validity of this concept.

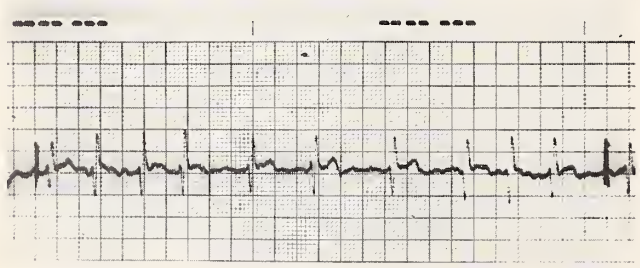


Figure 3
Atrial fibrillation with uncontrolled ventricular response.

Pulmonary edema is a well known complication of heroin overdosage, but atrial fibrillation has not been emphasized as a concomitant finding. The infrequent occurrence of atrial fibrillation may be due to lack of recognition in an urgent clinical situation rather than to rarity of this complication.

As exemplified by our two patients, the combination of hypoventilation or apnea, coma, and atrial fibrillation with or without pulmonary edema in a young person should strongly suggest the diagnosis of acute narcotic poisoning.



Figure 4
Chest X ray at the time of admission shows pulmonary edema.

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RADICULOMYOPATHY IN A SOUTHWESTERN INDIAN DUE TO SKELETAL FLUOROSIS

STANFORD M. GOLDMAN, M.D.

MAURICE L. SIEVERS, M.D.

DAVID W. TEMPLIN, M.D.

Although skeletal fluorosis is often recognized in the United States, only one case of fluorotic radiculomyopathy in this country has been published.[1] However, skeletal and neurological abnormalities related to chronic excessive fluoride ingestion have been well documented in several areas of India.[2] The present report is of regional significance because fluorosis occurs in several parts of Arizona.

CASE REPORT

A 55-year old Papago Indian male from Gila Bend, Arizona was admitted to the Phoenix Indian Medical Center on May 2, 1969, for evaluation of possible pulmonary tuberculosis. He had a lifetime history of drinking large quantities of water with a fluoride concentration 4 to 8 times that recommended by the U. S. Public Health Service.[3] He also often drank hot tea. Longstanding severe weakness of both legs was attributed to trauma from an accident 10 years earlier.

On examination he had bilateral flexion contractures of both knees and elbows. The range of knee motion was 80-95° on the right and 80-140° on the left. Limitation of abduction and rotation of the shoulders was noted. The neck and spine were completely rigid. Muscle tone was normal, but sensation to light touch and pin prick was decreased over the dorsum of the right foot. He was unable to stand without assistance.

X-ray examination revealed generalized increased bone density of the spine, ribs, and pelvis, suggestive of skeletal fluorosis (Figures 1 and 2). Extensive accompanying osteophytosis was present. No evidence of previous vertebral fracture was noted. The sagittal diameters of both the cervical and lumbar spine were below the 90 per cent tolerance levels[4-6] (Tables 1 and 2).

This article from the Radiological and Medical Departments, Phoenix Indian Medical Center, 4212 North Sixteenth Street, Phoenix Arizona 85016.

Present address of Dr. Goldman: Department of Radiology, Einstein College of Medicine, Bronx, New YoYrk 10461.

Present address of Dr. Templin: Alaska Native Medical Center, Anchorage, Alaska 99501.



Figure 1
Cervical spine films demonstrating market narrowing of the bony canal. Note the marked osteophytosis present.



Figure 2
Lumbar spine films demonstrating narrowing of the bony canal, dense bones, and advanced osteophyte formation.

Laboratory findings included a nonreactive VDRL, and normal hemoglobin, hematocrit and serum calcium, phosphorus, alkaline phosphatase and acid phophatase. Chemical analysis for fluoride of an extracted tooth revealed the following high levels: the bulk canal, 614 parts per million (p.p.m.); a calculus from the crown, 4838 p.p.m.; and a supragingival calculus 5299 p.p.m.

TABLE 1
Sagittal Diameter of Cervical Spinal Canal

	90% minimal tolerance limits for sagittal diameter (mm) (according to Hinck[4])	Lowest normal limits (mm) (according to Wholey[5])	Present patient's measurements (mm)
C-1	16.8	16	15
C-2	16.1	16	12
C-3	14.3	16	10
C-4	14.1	14	9.5
C-5	13.9	14	11

TABLE 2
Sagittal Diameter of the Lumbar Spine

	90% tolerance limits for sagittal diameter (mm) (according to Hinck[6])	Present patient's measurements (mm)
L-1	16	14
L-2	16	12
L-3	17	13.5
L-4	17	13
L-5	16	12

Several specimens of the water from this patient's lifelong drinking source have been evaluated during the past four years by the Arizona State Health Department with the range of fluoride concentration being 5.2 - 7.8 p.p.m. A random sample of this water, analyzed by Dr. Leon Singer of the University of Minnesota at the time of the tooth analysis, revealed a fluoride content of 4.04 p.p.m. by water ion electrode method and of 4.27 p.p.m. by diffusion isolation and colorimetric analysis.[7] The usual recommended fluoride concentration of drinking water for prevention of dental caries is 1 p.p.m.[8]

A diagnosis of fluorotic radiculomyopathy was made and confirmed by the consulting rheumatologist. Intensive physical therapy was begun. Prior to his transfer to a tuberculosis hospital he had attained full ambulation with the use of a walker.

DISCUSSION

The water assay findings established that ex-

cessive fluoride exposure had occurred. Results of the patient's tooth analysis confirmed fluorosis. Two of the patient's practices further elevated the previously high water fluoride concentration: (1) boiling of water for the hot tea which he often drank and (2) keeping his drinking water supply for several days in open containers which permitted marked evaporation in the low humidity prevailing at Gila Bend, Arizona.

The characteristic vertebral changes of skeletal fluorosis and severe osteophytosis were probably the basis for his neurological deficits. Although trauma may have precipitated his radiculomyopathy, the neurological symptoms are adequately explained by the marked narrowing of the sagittal diameter of the spinal canal and the vertebral osteophytosis secondary to fluorosis. Any trauma which might have caused edema of the spinal cord could have produced neurological damage because of the narrowed bony spinal canal. Thus, the role of trauma is equivocal since bony encroachment on the spinal cord was probable. Wolf has stated that cord compression is likely to occur when the cervical canal is 10 mm or less.[9] The bony canal at C-4 in this patient was 9.5 mm (Table 1).

Chronic excessive fluoride ingestion causes marked changes in the normal architecture of the skeleton. The bones ultimately become chalky-white with dense, thick cortices and narrowed medullary canals. The vertebral bodies enlarge causing narrowing in the antero-posterior diameter of the vertebral canal. Large osteophytes develop which encroach upon the intervertebral foramina; and the interosseous membranes and ligaments calcify leading to rigidity of the spine.[2] These bony and ligamentous changes produce neurological deficit by compressing the spinal cord or the nerve roots or both. Thus, either radicular or myelopathic abnormalities may result. The radicular features consist of muscular wasting, acroparesthesiae and subjective pain referred to the nerve roots. Muscular wasting results largely from selective damage to the anterior spinal roots from the narrowing of the lower portion of the vertebral foramina and to a lesser extent from the atrophy of disuse.[10]

The myelopathic manifestations consist of spastic weakness, exaggerated deep tendon reflexes, and extensor plantar reflexes. Patchy sensory changes and occasionally a definite sensory level are found. The onset of symptoms is usually insidious and increases progressively over a number of years.[11] Stiffness of the back and lower extremities are the usual complaints. An increasing weakness of both lower limbs may later extend to the upper extremities as well. Many of the patients are completely bedridden. The best description of the severely affected individual is, "a quadriplegic kyphotic with markedly restricted movements of the rigid spine and with flexion contractures of the extremities."[2]

Skeletal fluorosis occurs in only a small percentage of those with prolonged ingestion of water with excessively high fluoride concentration. Furthermore, radiculomyopathy is rare among those who develop skeletal fluorosis. It should be stressed that water fluoridation programs for dental caries prevention have no potential for causing either the skeletal or neurological complications because of the low fluoride concentration (1 p.p.m) recommended.

SUMMARY

The findings of a Papago Indian with the second reported case of fluorotic radiculomyopathy in the United States are presented. Neurological deficits occurring in this entity as a manifestation of spinal cord and nerve root bony compression are described. This radiculomyopathy is rare but it is of regional importance since fluorosis is endemic to Arizona. The lack of any potential skeletal or neurological hazards from water fluoridation programs for dental caries prevention is stressed.

AKNOWLEDGMENT

The authors wish to express their appreciation to Dr. Leon Singer, Professor, Biochemistry University of Minnesota for the fluoride analysis of the tooth and water sample and to Mr. Leo H. Snyder, sanitation engineer for his assistance in obtaining water samples from various wells.

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CARCINOMA OF THE COLON AND RECTUM

NATIONAL CANCER CONFERENCE JANUARY, 1971

Reported by Darwin W. Neubauer, M.D., Tucson, Arizona

Carcinoma of the colon and rectum is a disease of civilization and now the number one cancer in the United States with 75,000 new cases each year, 46,000 of them ending fatally. This results in a five year survival of 39% where there should be a survival of 70%, for this is the anticipated survival if the lesion is treated when it is still localized.

Dr. Burkett presented rather convincing statistics in epidemiological studies of cancer and other noninfectious diseases of the large bowel, including in this area appendicitis, diverticular disease of the colon, polyps and cancer of the colon. His data would indicate a common factor that leads to these diseases and not that one disease leads to another. These studies would indicate that bowel cancer is increased seven fold by the way we live, it being related to the economic status and diet, this is an environmental factor, not a genetic factor. As the size of the stool increases with an increase in roughage, passage time of that stool is diminished, the distention pressure of the bowel is diminished and the bacterial count goes down; that is, the greater the size of the stool, the less the time of passage, the less bacterial count, the less the break down of bile salts, and the less the incidence of cancer. The intestinal transit time for the American white is three times as long, and the stool bulk is one-third as great as that for the African black. There is no evidence that the presence of meat in our diet has a relationship to the development of cancer, dairy products do not seem to be a factor, nor does intestinal infectation with parasites act as a protective mechanism.

Dr. Cole confirmed Dr. Burkett's work in showing that constipation can be related to the development of malignancy, for in the laboratory rat receiving a carcinogen there is much less malignancy in the rat with diarrhea, and a much greater incidence in the rat that is constipated. His studies further showed that the normal development of the epithelial cells of the colon are from the crypts of Lieberkuhn's with migration of the cells from this zone along the wall to the lumen and then desquamating; a process that in man takes three to four days. In the patient predisposed to colonic cancer or polyps, the mitosis occurs on the surface of the crypts.

Dr. Lipkin pointed out that the well differentiated tumor on microscopic examination may be biochemically quite malignant, and there are definite biochemical differences between polyps and the malignant cells.

Dr. Carl Baker — "Priorities In Cancer" — noted the unreasonable distribution of awarding grants for research in cancer in 1970, there were sixty NCI research grants for cancer of the liver, eight grants for cancer of the bowel. He believes that the data available now has enough ingredients to determine the cause of cancer, but we need to develop a super-program to put these facts together.

Dr. Lee Wattenberg noted that our bodies can develop microsomal enzymes which are protective in nature. They are our drug metabolizing system, being able to metabolize many hydrocarbons. They are found in a variety of tissues and are present as an enzyme barrier at the major portals of entry of the body, including the lungs, gastro-intestinal tract and liver. In the gastrointestinal tract, they are of primary concentration in the small intestine, but they do exist in the stomach decreasing in amount from the cardiac to the pyloric end. In the small bowel, again there is a gradient from the proximal to the distal small bowel but it is in this organ that they are in significant concentration. The same gradient is noted in the large bowel. There are exogenous inducers as the members of the mustard family, consisting of brussel sprouts, cabbage, green turnips, broccoli and cauliflower which can stimulate the production of these productive enzymes both in a qualitative and quantitative way. The development of these protective enzymes will actually inhibit development of tumors and if aromatic amines are given as carcinogens, they become less effective in that patient. There may have a seven-hundred fold increase in concentration of these enzymes as the result of being stimulated by the "exogenous inducers."

Dr. Phillip Gold discussed the tumor specific antigens detected and available for the diagnosis of colonic cancer, noted as the CEA antigens — Carcino embryonic antigen. This antigen is present in all the endodermal derivities that are malignant. An antibody is produced to this antigen. The antigen is increased in concentration as one procedes down the gastrointestinal tract. In non-metastatic lesions, 75% of the patients will present anti-bodies to this antigen. However, with the development of metastasis, the circulating anti-bodies are absent. They may be absorbed by the large tumor mass, or else tied up by the large amount of antigen released. This antigen has also been detected in the presence of cancer of the pancreas, bronchiogenic carcinoma, alcoholic liver disease, and uremia. Further, during the first two trimesters of pregnancy the CEA antigen is present.

In their studies 35 of 36 patients with a known tumor of the colon or rectum were found to have detectable circulating antigens. In 28 patients where they were seeking a diagnosis and developed twenty-eight positive results, 18 of these patients later developed cancer of the gastrointestinal tract.

However, this technique is not yet ready for wide use, for it takes days to perform, there is little known about the material used, the antigen has not been stabilized, this antigen may be picked up under other conditions, and at present there are marked differences of the different laboratories that are presenting results.

Dr. Howard Raskin showed an 80 to 85% diagnostic accuracy for small carcinomas by using the pap stain for cytological examination of colon specimen.

Dr. Jonas Salk believes that our hope for a cure in this disease is a false hope, for cancer is a way of life: it occurs in all multicellular animals. There is an error in the transcription of the genetic code which may be spontaneous, the result of viruses, carcinogens or radiation. If an immune factor is involved, this factor may protect rather than destroy the cancer cell; that is, there is development of a pro-cancer cell antibody which blocks the protective antibody of the host from acting upon the cancer cell.

THE USEFULNESS OF MEDICAL HISTORY FOR MEDICINE

Physicians have studied medical history for more than 2000 years. From personal experience, your Editor has found such study instructive, useful, reassuring and fun.

Historical myths have always been relied upon if historical knowledge was lacking or disdained. When philosophy conquered mythology, medicine too became imbued with a spirit of speculation. In the Renaissance medical biographies developed as the preferred type of medical history. In all of these cases, the life of the man appeared as an outstanding example with meaningful influence on the lives of many others. The modern historian also stresses the forces — social, economic, traditional and perhaps even hereditary, which shaped the man and urged him to his work. The function of the biography is to set an example, to invite admiration, and thereby imitation. In this way medical biography is useful as an instrument of education.

The writings of a physician are part of his life work, and their titles and contents find a natural place in his biography, if warranted. In addition, every good piece of research, whether clinical or experimental, should include a perusal of the literature, and how far back the search should go will depend upon the subject. Thus, the history of medicine contains the records of all medical experiences, discoveries and theories from the early beginnings to the present day — true or false.

No part of medical historiography has a greater value than the history of diseases, truly a connecting link, for it contributes to the study of a pathological phenomenon.

Medicine and the preservation of health have assumed an importance greater than ever before. The physician has more responsibilities than previously. This role of leadership requires an education to which the history of medicine has something substantial to contribute. William Hazlitt said it well: "By despising all that has preceded us, we teach others to despise ourselves. Where there is no established scale nor rooted faith in excellence, all superiority — our own as well as that of others — soon comes to the ground." For the physician, for medicine, and society as a whole, medical history is indeed useful in increasing perspectives.

John R. Green, M.D.

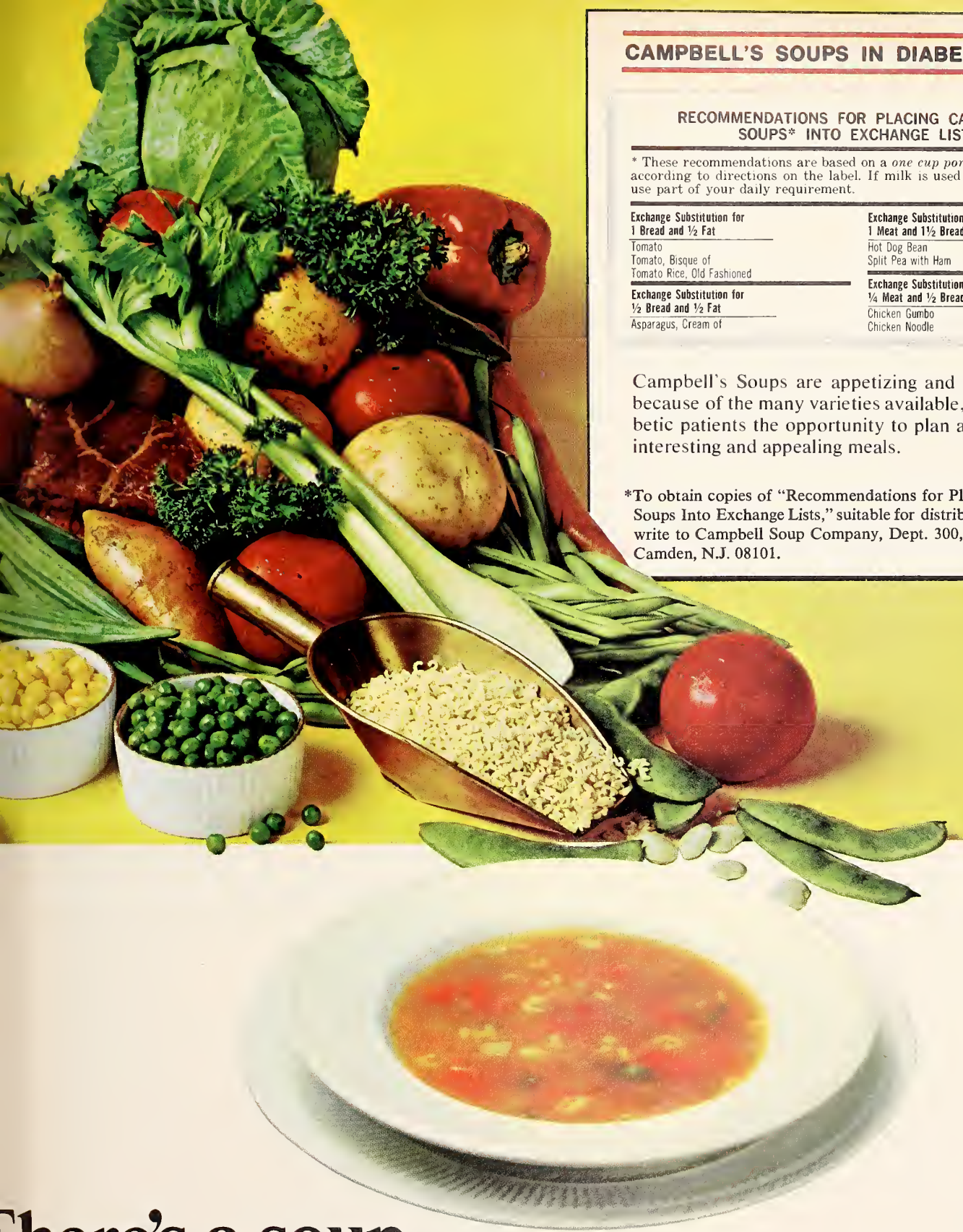
AM *Editor's Page*

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President's Page

ARIZONA MEDICAL POLITICAL ACTION COMMITTEE

The health care professions are undergoing many changes. We see changes in undergraduate, graduate, postgraduate and continuing medical education. Many proposals are under consideration which will alter the delivery and method of financing health care services. These changes will affect all of us and the manner in which we practice medicine. Social pressures will produce some of these changes but largely they will be due to economic and political pressures.

In order to produce change in our political and social system many groups have organized for concerted, unified action. The unions, government employees, minority groups, the elderly, etc. have been very successful with such efforts. After a rather slow start organized medicine, through the activities of its political action committees has demonstrated the ability to get medicine's policy decisions and proposals presented to and considered by state and national legislative bodies.

AMPAC is the organizational unit of the AMA responsible for political action at the national level. Past years of well planned efforts are now resulting in the AMA being a potent force in shaping national policy on health care programs.

In Arizona ArMPAC is doing such a job for us. In the coming months they will be evaluating candidates for the new 4th Congressional District and providing support to those candidates of either major political party where appropriate.

The elections in the next several years are of the utmost importance. ArMPAC needs to grow and increase its influence. Far too few ArMA members are dues paying members of ArMPAC. Now is the time to join together as an effective political group. By so doing we can help direct and shape social and political changes which will determine our professional future.

James L. Grobe, M.D.
President



A LOOK AT "BRAIN PROBING"

A recent issue of a popular magazine features an article on "Brain-Probing," vivid in examples and predictions of how "Brain-Probers" can ease human suffering. Yet the story fails, according to our neuroscientists at the College of Medicine, to capture the essence of "Brain Probing."

Here are some views: A coed whose EEG suddenly displays alpha-rhythm, feels a "Yoka-like inner peace. . ." a housewife given to uncontrollable rages, awaits surgical ablation of a cluster of abnormal neurons related to her seizures. . . a young man at the brink of suicide has electrodes implanted in his brain which when stimulated induces the sensation "better than sex." A neurophysiologist confronts a charging bull, halts the animal with radio-waves transmitted to electrodes in its skull, and later predicts a "psycho-civilized" future society. A clinician conditions heart patients "like trained athletes" through psychological techniques to regulate their heart rates to prevent lethal irregularities . . . and other fascinating and sometimes frightening images of electrical stimulation of the brain, psychosurgery, biofeedback, genetically enhanced intelligence, memory molecules, and information pills. One recalls a cartoon in which an effusive matron tells a bearded stranger at a cocktail party, "Oh, don't be modest Professor. I'm sure you've something up your sleeve that will blow us all up!"

These images although anthropocentric or bordering on science fiction represent impressive progress in which laity and scientists share hopes and concerns. Major advances have been made or are imminent in medical research and therapy in neurology, neurosurgery, and psychiatry. Our neuroscientists approve; in fact, assist. We do not criticize those who enter the bull ring or write of civilizations subjugated by supermen with superbrains; instead they applaud those scholars for dramatizing their discoveries and for discussing the implications for society.

Most neuroscientists, however, seldom engage in such dramatic activities, and yet equally deserve attention. Neuroscientists look where they are going, but in immediate terms. They ascend slowly on a cliff of enormous biological complexity. Only recently have they gotten tools to overcome obstacles, to make their exploration higher-reaching and new stances more nearly secure. These tools include electron microscopes, new strains to trace nerve fibers, multi-barreled microelectrodes to resolve patterns of impulses, cell culture techniques for study of isolated neurons, improved methods of behavioral observation, more sensitive microchemical procedures to evaluate drug action and neuronal response, autoradiograph to follow the history neurons from origin in the embryonic brain to death in old age or during development; and mathematical principles and computers to analyze the unbelievably complex array of signals that even a half-dozen neurons invertabreas can generate.



Our own neuroscientists are hard at work with these tools, the range of activities is great. Traditional routes of neural inquire are re-explored, new ones opened up. Skills are specialized as in medicine and surgery, although all regard themselves as neuroscientist, much as Arizonans a century ago considered themselves frontiersmen. They sometimes confound one another with specialized vocabulary, nevertheless interest in muscular contractions in neuroendocrine partnerships and the nerves and brain that integrate these functions unite them, regardless of individual research pursuits. The exploration in these probings of a nervous system of a normal or brain damaged man, a neurologically defective muted mouse the ubiquitous laboratory rat or cat, an ancestoral fish netted in the ocean depths, a marine snail, a sea anemone; it is all the same to the neuroscientist: another opportunity to see and share glimpses of nerves and brains and how they work, less colorful perhaps than medical, sociopolitical or other vistas than the horizons seen in the magazine, but for the neuroscientists and laymen too, could he share "View from the Top" more far reaching, important, intriguing and satisfying.

Jack Layton

Editorial

DISMANTLE THE ORGANIZATION



WILLIAM B. McGRATH, M.D.

The structure of an organization is the sum of the individuals who comprise it. The function of an organization is to lessen individuality in the pursuit of cooperation and efficiency. It is true of any society: the stronger the organization, the weaker its members. This is a looming dilemma which confronts every one of us, in any trade or profession and in government.

A man cannot make a living without belonging (sic) to some organization, thereby relinquishing some of his independence. Count, for illustration, the number of associations which a licensed physician has to join — ingratiating himself, submitting his qualifications, taking examinations, requesting "privileges," attending mandatory meetings, paying dues and special assessments, accepting the bylaws and a hundred restrictive rules and regulations; dreading that at any time his fitness and therefore his very livelihood will be brought into question by self-appointed peers or anonymous committees.

He will be graded and stamped and certified like beef in a packing house. Above him in the vertical pecking order will be the courtesy staff, the honorary staff, the consulting staff, the visiting staff, the active staff, the teaching staff, and finally the "chiefs" of services, the real in-group, employed by the hospital.

There is no grading without degrading. Subordination of the individual is perhaps even worse in the military and in industry and commerce. An employee had better contribute a specified amount to a "voluntary" charity drive. The board arrogates the right to require a teacher to take a loyalty oath. An executive must be willing (a contradiction in terms) to undergo psychological testing, and his whole personal life will come under evaluative investigation. Everyone rises at the entrance of the judge in his medieval robes, and we address him as "your honor," but he must "run" for office.

Organization for the sake of efficiency is witlessly dragging mankind back to feudalism: people become serfs and vassals, paying homage and fees and service for the "privilege" of working.

Impotent and oppressed, the individual cannot resist the emasculating power of organization. He has to join and submit. Repressing the instinctive (stallion) goal of self-determination and free enterprise, he will ignore his serfdom or rationalize. So he will forgive us, sweetly, and protest that an effective team must have pyramidal organization, must have leadership and followers, a hierarchical system.

We have no real proof that this is so since any other approach has never had sufficient trial. In either case our technologies are advancing so overwhelmingly that we could afford to sacrifice a little efficiency in the interest of individual integrity. We had better! Machismo is not measured by status or proven on the golf course.

Organized medicine at any level ought not lead or follow the subservient inclinations of the masses. The hackneyed phrase, "delivery of health services," suggests that medicine is a commodity — perhaps to be sold or traded for coupons in a chain of supermarkets? It is the same old epistemological error: Medicine is not a service; it is a positive function.

And the function of organized medicine is to preserve and enrich the health of society. When organization itself begins to undermine the health of society, then it is our duty to attack organization.

Any illness of society can hardly be different from the illness of an individual. Our country seems to be organically sound. We can defend ourselves against invasion; the drinking water is pure and our sewage systems are better than average; we have more than our share of food and housing.

But no one would dispute that collectively as well as individually we are nervous.

Now in any functional disorder, in any case of nervousness, what does the psychiatrist look for? Invariably he will find a basic loss of self-esteem. All the symptoms and all the defense mechanisms seem to derive from the losing of self-esteem.

It is up to the professions to set the restorative example. Our own societies and associations should be as loosely knit as possible, freely cooperative, never intimidating or coercive. The physician's connection with the hospital, for example, could well do without most of the ranking and regulating. The fact of being on a staff (just yes or no) should presume the individual's good judgment and he should be quite free to work according to his abilities.

In almost every issue and at every opportunity the educated person should stand and vote against more administration, more management, more regimentation. He should vigorously oppose anything that smacks of rigidity or grading or group coercion.

The lifeblood of mental health is self-esteem. When we are mindful of this, then both professionally and privately each of us will always discourage any kind of subordination. We will not invite or permit any human being to enter a master-servant relationship which would allow him to be obsequious, subservient.

We are called Doctor, but this is for identification and surely not a title with the decadent European connotation. The attendant at valet parking is entitled to exactly the same courtesy and respect that we expect from him. The waiter should never be deferential to the point of servility, and the cocktail waitress should not pretend to be seductive or impressed to solicit a tip. The maid does her chores and we do ours. The secretary does not work "for" a boss. It is a voluntary cooperation. The nurse does not work "for" the doctor or the hospital. She works for herself in one location or other.

It is a trade, a literal equation: the employee applies and is engaged; reciprocally the employer applies and is engaged; the employer can fire the employee and the employee can fire the employer. In a true democracy, wages and salaries are already anachronistic, out of place. After the stock market model, each person should share in the profits or losses according to his investment.

It is not just a play on words to insist that the individual does not belong to the organization or work for it. He works for himself and the organization belongs to him. He must never be treated or view himself as a member, in the sense of an arm or leg. He is a whole man. In or out of the organization a man can work for himself in whatever job, using his own skills and resources. He must get back the feeling that he is tilling his own small plot of land. When he cooperates with his fellows it is because they are his fellows, and they and he are scornful of status or rank. Such a subtle change of attitude will help to restore the self-esteem of the individual and of the society to which he belongs — no; which belongs to him!



THE GORDIAN MANPOWER KNOT

Critics accuse the American Medical Association of deliberately fettering medical education for the shameful purpose of guaranteeing a perpetual doctor shortage in the United States. The evidence they often display for this tiresome humbuggery is the fact that in 1933 the AMA House of Delegates received a study from its Council on Medical Education and Hospitals which said that there was an estimated surplus of 25,000 physicians in the United States and suggested that the AMA cooperate with the Association of American Medical Colleges to reduce medical school enrollments. The report was noted; no action was taken.

That was nearly forty years ago, when our country was eviscerated by a depression and some doctors were unable to practice and even forced to seek other jobs. Overcrowding of the profession was a truth and the AMA's concern realistic. Events of the last two decades tell a different story.

At its 1971 Annual Meeting held last June in Atlantic City, the AMA House of Delegates adopted a perceptive report on Physician Manpower and Medical Education that emerged jointly from its Council on Medical Education, Council on Health Manpower, Council on Medical Service, and Board of Trustees. These are some of the significant and timely elements of the report:

Since 1951 the AMA has operated under the clear policy that it does not attempt to regulate the size of the national student body in medicine, that it regards this to be a proper function of the medical schools, and that it strongly supports the sound production of more doctors. This support has been impressive.

In 1910 there were 12,530 medical students in approved schools. By 1930 the number had risen to 21,982 with 4,735 graduates, and by 1950 to 26,186 with 6,135 graduates. Then it took off. In the next ten years the student body increased an average of 410 per year so that in 1960 there were 30,288 students and 6,994 graduates. And in the sixties the student body swelled more than a thousand per year to 40,377 students in 1970, and 8,996 graduates. It is estimated that 11,000 medical students will graduate in 1975.

There were 76 medical schools in 1930, 86 in 1960, and 103 in 1970. Five new schools are expected to open in 1971, and five more in 1972, which will raise the total to 113. It is probable that 120 schools will be operating in 1980.

In addition, one-third of the schools are offering a shortened curriculum, and the enrollment in existing schools will be expanded 25% in the next five years. On the other hand, some schools are at capacity and cannot expand without sizeable new construction or, in some cases, complete relocation.

Unfortunately the number of medical school applicants has grown at an even greater rate than the capacity of the schools. In 1968 there were 21,117 applicants and 9,863 freshmen students. In 1969 the numbers were 24,465 and 10,401, and in 1970, 11,360 freshmen students were chosen from 25,400 applicants. Fewer than half are making it.

The Association of American Medical Colleges estimates on the basis of Medical College Admission Test scores that approximately 75% of the applicant pool is qualified for admission to medical school. This means that perhaps one-half of the applicants who don't make it actually could be trained as doctors if there was room



DANIEL T. CLOUD, M.D.
Delegate to the AMA

for them. If the estimate is correct, there were 5,975 qualified applicants rejected in 1968, 7,948 in 1969, and 7,690 in 1970 — agonizing figures indeed.

The experience in Arizona has been similar. Our College of Medicine received 1,581 applications for the class that began this September. Only 280 applicants were considered — 264 Arizona residents and 16 from four of the WICHE states. Eventually, 64 were taken into our freshman class and 33 found their way into other medical schools for a total of 97 acceptances. Ninety-six were Arizona residents.

Of the original 280 applicants, 183 did not make it into medical school. Probably 90 of these could successfully study medicine if space were available. Again, an agonizing figure.

What is the magnitude of the physician manpower shortage? In 1967 President Lyndon Johnson declared that we need 50,000 more doctors to meet our health needs. Where he found that hypothetic number is unclear, but it assumed the status of fact and if often quoted even though we already have 25,000 more doctors than in 1967. At the other extreme, some observers feel that if our health care delivery system were revamped, no more physicians would be needed.

Nevertheless, there is general agreement that doctors are definitely in short supply. But the delivery of health services is complex and in some ways independent of the availability of physicians. We cannot solve all the problems of health delivery by simply increasing manpower.

Ironically, back in 1945 the AMA suggested that medical schools continue the accelerated teaching schedules they employed during World War II. If that advice had been followed, we would now have an additional 55,000 doctors, more than the Johnson estimate of our deficit!

Physician-to-population ratios have limited value, but they do provide an informative index to manpower progress. In 1960 there were 149 doctors for every 100,000 of population, and in 1970 the ratio was 163 per 100,000. In that decade the general population growth rate was slightly more than 1% per year, while the doctor population growth rate was substantially higher at nearly 3% per year; soon it will exceed 3%. The cumulative net increase of doctors was 57,553 for the decade, and if the faster growth rate of physician population continues, a better balance of physician supply is inevitable.

American medical schools are averaging 8,000 graduates, but 4,000 physicians die every year leaving a net annual gain of only 4,000. In addition approximately 4,000 graduates of foreign medical schools immigrate to the United States every year. The foreign graduates are doubling our annual gain in physician population. Thus they account for most of the differential growth rate between physician population and general population. More foreign medical graduates are being licensed, and it is probable that they will soon be joining us at a rate of five or six thousand every year.

At the same time the demand for health services is increasing and will press more heavily on supply if national health insurance is enacted. It may be possible by 1975 to measure with some accuracy our needs for physician manpower; in the meantime we should continue to increase production.

Given a steady increase in the number of physicians, we still need to solve the perplexing problem of how they can be distributed to give care where it is needed. There is little incentive for a doctor to practice in an undesirable, even possibly dangerous, locale, and there remains a sizeable trend toward specialization and away from general practice.

The AMA has recognized the special need for family physicians who alone are able to provide the basic, comprehensive personal care that is most lacking in the broad perspective of health delivery. AMA collaboration helped produce the family physician specialty, and the AMA continues to encourage strong support for educational programs to train family physicians. The Arizona Medical Association has joined this effort by urging increased emphasis on family physician training at the university.

American citizens studying medicine in foreign medical schools are a special problem. They number approximately 3,000 with the largest concentrations in the Autonomous University of Guadalajara in Mexico and the University of Bologna in Italy. Many came from the group of qualified applicants who could not find a place in the United States. As the applicant pool continues to swell, even more will find their way to foreign schools. But the road back has been tough.

In June the AMA House of Delegates adopted a plan suggested by its Council on Medical Education that will materially ease the re-entry problems for these graduates if they took their premedical work at home in an accredited school and were qualified but could not find a spot in an American medical school. Under this new plan, they can return to the United States after graduating from the foreign school and serve a special clinical clerkship designed to augment their foreign training. They can then proceed normally through postgraduate training and licensure. Hopefully this will help us recapture some qualified young people.

Whatever happened in 1933, it is nonsense to continue the diatribe about organized medicine choking the supply of new doctors in order to strengthen its co-called monopoly. The facts make a mockery of that accusation. Yet, much remains to be accomplished. We do need more doctors, and we need to use them more effectively. These are elemental issues in our struggle to preserve a free system of health care.

In Memoriam

WILLARD V. ERGENBRIGHT, M.D.
1915-1971

Willard V. Ergenbright, M.D., born November 3, 1915 in Dallas, Texas; died April 19, 1971 at the Cleveland Clinic while undergoing coronary angiography.

The years life allowed Bill Ergenbright were much too short for a man so dedicated to his profession and so loved by his family, colleagues and friends — hundreds of which were his patients. With each individual he shared a unique personal relationship which left many lasting friendships.

He was brought up in Atlantic, Iowa, graduating from the Atlantic High School in 1933 and receiving his medical degree from the University of Iowa in 1941. As a Medical Officer in the U.S. Army, he was discharged in 1946 as a Major, having served tours of duty in Northwest Canada, Alaska, and the Aleutians with the Northwest Division Engineers, a tour of duty in the Pacific area with the Medical Corps of the 10th Army and participation in the invasions of Okinawa and the occupation of Japan. Following his discharge he completed his orthopedic residency at the University of Iowa and began his practice in Phoenix in 1953.

Those who knew Bill Ergenbright know that he was not a man for fancy words. He never had any difficulty in getting his true thoughts across to those he came in contact with and never held back in any facet of life.

He was a genuine physician, a cherished colleague and a superb humanitarian. All concerned were deeply grieved by his untimely death. He is survived by his wife, Shirley, and daughter, Ann.

James D. Alway, M.D.

Letters to Editor

John R. Green, M.D., Editor
Arizona Medicine
810 W. Bethany Home Road
Phoenix, Arizona 85013

Dear Doctor Green:

The article, "Indications for Extracranial Vascular Surgery in the Treatment of Stroke," (Arizona Medicine, July 1971, Vol. 28, No. 7) by Richard A. Thompson, M.D., is a thoughtful and most useful piece of work. This kind of critique is necessary to help the practitioner find his way through the maze of literature and contradictory evidence.

I should like to congratulate Doctor Thompson in his effort. I should also like to request that next time he apply similar critical review methods to the problem of the vertebral artery, which is even more difficult than the carotid, inasmuch as it is less accessible, less frequently studied, and much more obscure.

It is my feeling, though not substantiated through statistics, that in the field of vertebral artery deficiency, even more stringent critical evaluation is necessary because of the greater risks involved, the fewer factual data available so far, and particularly because of the rather serious contradictions in the literature regarding the events following vertebral occlusion or insufficiency.

Evidence so far accumulated, and admittedly it is not anywhere near unanimous, would indicate that in the field of vertebral artery research and surgery, great expectations and possibly results are in store for the courageous soul who will tread on this terra incognita.

Sincerely yours,
Otto L. Bendheim, M.D.

Topics Of Current Medical Interest

BOOK REVIEW

Medical Specialty Terminology — Pathology, Clinical Cytology and Clinical Pathology—Clara Gene Young, James D. Barger, M.D., F.A.C.P. C. V. Mosby Company—Price $8.50.

The book is intended to meet the needs of allied medical workers as a source of authoritative information on the medical terminology of the sub-titled fields of Pathology.

Arizona physicians will recognize the authors of this book as the former instructor of medical terminology and the chief pathologist at Good Samaritan Hospital

The value of the book, however, is not limited to terminology. It is an excellent source of information in abbreviated form on many pathological conditions, as well as a complete glossary of pathological terms. The organization is logical and excellent.

The principal users of this book will probably be physicians, because of the brevity and thoroughness of the text.

Physicians are frequently in the position of the youngster who, upon asking his father a question, was referred to his mother. The lad said, "But Dad, I didn't want to know that much about it!"

Paul B. Jarrett, M.D.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

PEER REVIEW ADVISORY COUNCIL

The first meeting of the Peer Review Advisory Council of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Sunday, June 27, 1971, convened at 10:20 a.m., Seymour I. Shapiro, M.D., Acting Chairman, presiding.

CHAIRMAN

It was moved and carried that Patrick P. Moraca, M.D. be appointed chairman of the Peer Review Advisory Council.

REVIEW

The Committee reviewed Resolution No. 9-71 adopted by the House of Delegates on May 1, 1971, plus the proposed Bennett Amendment, staff report on the Bennett Amendment, and the Peer Review Manuals prepared by AMA. There was considerable discussion regarding alternatives in implementing the creation of an umbrella organization for handling a Peer Review Program and utilization of existing peer review structures (Foundations for Medical Care) in Arizona.

IMPLEMENTATION

It was moved and carried that the Advisory Council recommend to the Board of Directors several alternative methods for implementing Resolution No. 9-71 to include the following:

1. Create one statewide PSRO to contract with HEW for Peer Review for all physicians.
 This organization could develop guidelines, coordinate local activities, handle appeals and grievances, contract with Maricopa County and Pima County for Peer Review in their respective areas and provide a Peer Review mechanism for the other twelve counties.
2. Create one statewide PSRO to contract with HEW for Peer Review. The statewide PSRO would develop guidelines, coordinate local activities, handle appeals and grievances. Contract with the Maricopa Foundation for Medical Care for the Peer Review of physicians in the central and northern part of the state. Contract with the Pima Foundation for Medical Care for Peer Review of physicians in the southern part of the state.
3. Create a statewide Foundation for Medical Care to contract with HEW for Peer Review, develop guidelines, coordinate local activities, handle appeals and grievances. Create a third foundation encompassing the twelve small counties. The state foundation's prime role would be to contract with the three foundations (Maricopa, Pima and the new twelve county foundation) to do Peer Review in their respective areas.
4. Create a "United Foundation of Arizona", which would be an arm of ArMA to contract with HEW and which would funnel Peer Review work to the local medical societies and foundations. This organization would also involve itself in all other aspects of foundation work.

It was also determined that the next meeting of this Advisory Council would include two representatives from each county (to be appointed by the county society presidents). At this meeting a "Peer Review" demonstration would be conducted and comments and suggestions would be solicited on the three proposals listed above as well as any other alternatives that would be presented.

Meeting adjourned 12:40 p.m.

Edward Sattenspiel, M.D.
Secretary

MEDICAL EDUCATION COMMITTEE

The meeting of the Medical Education Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Tuesday, July 6, 1971 convened at 7:30 p.m., Robert E. T. Stark, M.D., Chairman presiding.

REVIEW

The Committee reviewed Resolution 2-71, Continuing Medical Education Requirements as adopted by the House of Delegates May 1, 1971.

Dr. Stark reported that Clarke W. Mangun, Jr., M.D., Assistant Director, Department of Continuing Medical Education, American Medical Association, met with Messrs. Barnett, Robinson and himself on June third and fourth discussing how the AMA could assist ArMA with the Continuing Medical Education Requirements and assisted in the development of a proposed instructive brochure and application for certificate in Continuing Medical Education. It was determined that AMA could screen all applications, and an administrative flow chart to accomplish their participation was discussed with the Committee.

APPLICATION FOR CERTIFICATE IN CONTINUING MEDICAL EDUCATION INSTRUCTIVE BROCHURE

The Committee reviewed the proposed application for Certificate in Continuing Medical Education and the instructive brochure as developed with the assistance of Dr. Mangun. After considerable discussion, it was determined that the application and the brochure would be redrafted with the suggestions made, and distributed to the Committee members prior to the next meeting.

REQUEST FOR ArMA APPROVAL OF A COURSE OR PROGRAM

The Committee reviewed and approved of a form to be used by societies and institutions for approval of a program or course for credit by ArMA. It is anticipated that approved programs and courses will be publicized in *Arizona Medicine.*

POLICY DECISIONS

Since publishing of Resolution 2-71 in Medical Memos, and as a result of the meeting with Clarke W. Mangun, Jr., M.D., several questions have developed requiring policy decision which were made as follows:

1. The three year qualifying period to earn the minimum total of 150 credit hours will begin on July 1, 1969.

2. The ArMA approved courses, meetings, and activities in category 4e and f must be approved in advance by the Medical Education Committee or representative thereof. AMA will be informed of the approval for proper creditation.
3. Membership on Peer Review Committees, e.g., ArMA Section on Medical Review, Blue Shield Medical Review Committee, and hospital utilization review committee, will be credited under category 8.
4. Category 8 would include attendance at county society meetings.
5. All active members of the Association are required to complete the requirements of Continuing Medical Education without regard to age, or number of years in practice.

ASSOCIATION SPONSORED T.V. PROGRAMS

Mr. Robinson reported that when the Association sponsored T.V. programs for medical education was started there was very little expense involved, other than ArMA staff personnel time; however, the University of Arizona now charges $25 per show, $1250 per year. He also informed the Committee that the T.V. tapes involved were shipped on a prepaid basis; however, policies have changed and now it is necessary that the Association pay the air freight, which amounted to approximately $800 in the past 12 months.

It was also pointed out that one of the T.V. stations have moved back the original program hour from 10 p.m. to 11 p.m. A poll of the Committee indicated very little interest in the programs, especially during such a late hour.

It was moved and carried that the Medical Education Committee recommend to the Board of Directors that the television programs be discontinued at the end of the current programing period, which will be mid August.

Meeting adjourned 9:35.

Edward Sattenspiel, M.D.
Secretary

OCCUPATIONAL HEALTH COMMITTEE

The meeting of the Occupational Health Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, July 10, 1971, convened at 1:05 p.m., Joseph M. Hughes, Chairman, presiding.

MINUTES

The minutes of the meeting of February 8, 1971 were approved as distributed.

SECTION ON PEER REVIEW

Mr. Robinson reviewed the recent creation of the Section on Peer Review and the fact that on April 8, 1971, the Industrial Commission had been advised of the creation of this organization but reported that no action has apparently been taken by the Industrial Commission to utilize this new service. It was noted that additional time could well be necessary to develop interest and cases on the part of the various carriers. Received for information.

ANESTHESIOLOGISTS SERVICES

Carl A. Nau, Jr., M.D., President of the Arizona State Society of Anesthesiologists, letter of April 21, 1971, which was written in response to the request by this committee for assistance, was reviewed. Howard P. Aidem, M.D.'s letter of May 27th with regard to the inability to get anesthesiologist's services was reviewed. Walter V. Edwards, Jr., M.D.'s letter of June 4th dealing with the same matter was reviewed. Robert K. Park, Chief Counsel, Director of Benefits Division of the State Compensation Funds letter of July 2 on the same matter was reviewed. Extensive wide-range discussion was held on this matter with many aspects being handled in great depth.

It was moved and carried that Occupational Health Committee recommend to the Board of Directors that the Occupational Health Committee have permission to negotiate a new fee schedule with the Industrial Commission of Arizona and that the Industrial Commission be urged to adopt this fee schedule as soon as possible, but not later than August 30, 1971. The fee schedule would be based on the following:

CONVERSION FACTORS

1964 CALIFORNIA RELATIVE VALUE SCHEDULE

Medicine	8.0
Surgery	7.0
Radiology	7.0
Laboratory	5.5

1971 ASA RELATIVE VALUE SCHEDULE

Anesthesiology	8.0

It was pointed out by a member of the anesthesiologists group that the above proposed fee schedule could very well become obsolete by the end of this year. Their organization will be conducting a survey of what is usual and customary at that time.

ICA — CARRIERS — ArMA MEETING

Dr. Hughes reviewed the above captioned meeting as follows:

"On June 21, 1971, Gene Ryan and I met with the Industrial Commission and their Insurance Advisory Committee. The latter group represents the private carriers insuring about 45 per cent of firms coming under the Arizona Industrial Law (the State Fund insures the other 55 per cent).

The two main topics were current evaluation of medical fees and discussion of a rehabilitation program. As you are aware, the anesthesiologists are unhappy with the fee schedule and some of them have refused to do elective industrial cases. I pointed out at this meeting that, although the Occupational Health Committee had not formally met, our members probably would recommend that the Commission adopt the relative value scale which ArMA suggested last fall.

The Commission and the carrier representatives asked the following questions:

1. Are fees uniform throughout the state?
2. Has ArMA made any formal recommendations on fees?
3. Would it be possible to meet with the anesthesiologists to present their views?

The carriers stated that some physicians implied that they would overcharge and bring patients back if the fee schedule were not adequate. I brought up the fact that we had a Peer Review Committee and that they should make use of it in cases such as this.

I asked Mr. Thoeny whether the dentists had a fee schedule. The dentists have never negotiated one, and,

since they do not do much work for the Commission, the issue has never been pressed.

The discussion on rehabilitation was brief and it was decided that a member from our committee, one from the Commission, and one from the carriers would meet to discuss the possibility of earlier rehabilitation in those patients requiring it. This group will also discuss revising of the present industrial forms.

We will need to write a letter to the Commission following our meeting July 10th. This should include any recommendation that we have on a fee schedule, and it should answer the questions that they raised."

In response to the specific questions that were raised, it was noted that fees are not uniform throughout the state, that they vary somewhat from individual to individual in a community and from community to community for the various specialties and types of services rendered. It was also noted, as listed in the previous item in these minutes, we now do have a formal recommendation on fees to make. It was also noted that we would attempt to have the anesthesiologists formally present at our negotiations with the Industrial Commission.

In response to the suggestion that the matter of a rehabilitation program be investigated by a member of ArMA, a member of the Industrial Commission, and one from the carriers, it was determined to contact Dr. John S. Young to see if he would be willing to represent this Association in such a meeting. Dr. Ryan was to contact him to determine this.

ICA — ArMA MEETING AUGUST 10, 1971

Mr. Robinson related that he had received a request from the Industrial Commission to hold a meeting to discuss fees and other matters on Tuesday, August 10th. The committee agreed that this would be most timely and appointed Dr. Hughes, Dr. Ryan and Dr. Standifer to be present at that meeting. It was also determined to ask Dr. Carl A. Nau, Jr., who is President of the State Society of the Anesthesiologists, to be present, or if he is not available, for him to designate someone from that organization to be present.

It was recommended that we request the meeting to be held at 2 p.m. on August 10th.

COORDINATED DISABILITY EVALUATION PROGRAM

Dr. Ryan again reviewed the concept of the Coordinated Disability Evaluation Program wherein the patient would be evaluated in all aspects as soon as possible after the accident occurs, so that prompt early steps can be made in planning for the program of care for the patient. It was noted that while this coordination of such a program would be involved, it would ultimately reduce significantly the cost of maintaining these people over long periods of time as compensation cases.

Following considerable discussion, and many questions, the chairman asked Dr. Ryan if he would prepare a written format of the concept for a subsequent presentation to the insurance carriers who would be asked to finance such a program.

It was moved and carried that a section on coordinated disability evaluation be established and that the chairman of this section be Dr. Eugene Ryan.

COMMUNICATIONS

Estelline Greer letter — 3/17/71

The three-page letter from Estelline Greer, which was directed to this Association, dealing with compensation of chiropractors, was reviewed in-depth.

A case summary of this matter was presented also.

It was noted that the matter is now on appeal to the Appellate Court of Arizona.

It was the determination of the committee that until such time as the courts had acted on this matter it would be inappropriate for the committee to make recommendations one way or another.

OTHER BUSINESS

California Medical Association's Statement Regarding a New Minimum Fee Schedule for California Physicians.

This statement of current activity on the part of the California Medical Association in a petition to adopt a new official minimum medical fee schedule in California was received for information.

Recommendation to the Legislative Committee to Review the Current ICA Statutes.

Considerable discussion ensued on the possibility of our Association seeing that legislation is introduced to amend the Industrial Commission statutes giving the Industrial Commission more latitude with regard to the use or nonuse of a firm fixed fee schedule. The committee recommended that this matter be referred to the Legislative Committee advising the Legislative Committee that the Occupational Health Committee would be most favorable to such a change.

Phoenix Surgical Society — 1969 California Relative Value Schedule.

Mr. Robinson reported that he had received a copy of a letter dated June 21st over the signature of James G. Hopkins, M.D., President of the Phoenix Surgical Society. The letter was addressed to the CNA Insurance Company advising the Insurance Company that members of the Phoenix Surgical Society would be using the 1969 California Relative Value Schedule for coding purposes and that the conversion factors would be from 30 to 33, which would represent the usual and customary fee for surgical procedures.

It was pointed out that the Industrial Commission does not recognize the 1969 California Relative Value Schedule at this time; this letter was presented for information only. No action taken.

Meeting adjourned at 2:50 p.m.

Edward Sattenspiel, M.D.
Secretary
Bruce E. Robinson
Executive Director

SCIENTIFIC ASSEMBLY COMMITTEE

The meeting of the Scientific Assembly Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Sunday, July 11, 1971, convened at 10:09 a.m., Philip Levy, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting of October 11, 1970 were approved as distributed.

ORGANIZATION

Assistant Chairman

It was moved and carried that Wilfred M. Potter, M.D., be appointed Vice-Chairman for the 1972 meeting with the understanding that he be Chairman for the 1973 meeting.

Secretary

It was moved and carried that Edward Sattenspiel, M.D., be appointed Secretary.

FUTURE MEETING LOCATIONS

It was reported that the 1972 meeting, the 81st annual meeting has been confirmed for the Safari Hotel in Scottsdale for April 25-29, 1972. It was also reported that the 1973 meetings, the 82nd annual meeting, has been confirmed for the Safari Hotel in Scottsdale for April 24-28, 1973.

Following much discussion about the developments in convention and hotel facilities in Tucson, it was moved and carried that the 1974 meeting be arranged for in Tucson assuming that hotel facilities will be available at that time.

81st ANNUAL MEETING REPORT

The Committee determined to recommend to the Board of Directors that the following be the format for the 1972 meeting.

A. Board of Directors Meetings
 1. First Meeting. Date: Tuesday, April 25, 1972
 Time: 9 a.m.
 2. Second Meeting. Date: Saturday, April 29, 1972
 Time: 12 noon

B. House of Delegates Meetings
 1. First Meeting. Date: Tuesday, April 25, 1972
 Time: 1 p.m.
 2. Second Meeting. Date: Saturday, April 29, 1972
 Time: 8 a.m.

C. Reference Committee Meetings
 1. Resolutions. Date: Wednesday, April 26, 1972
 Time: 8 a.m.
 2. Articles & Bylaws. Date: Wednesday, April 26, 1972. Time: 10 a.m.

D. Blue Shield Corporate Body Meetings (to follow House meetings)
 1. First Meeting. Date: Tuesday, April 25. 1972
 Time: 3:30 p.m.
 2. Second Meeting. Date: Saturday, April 29, 1972
 Time: 10:30 a.m.

E. Blue Shield Reference Committee Meeting (to follow ArMA Reference Committee meeting). Date: Wednesday, April 26, 1972. Time: 11 a.m.

F. Evening Social Functions
 1. Wednesday, April 26, 1972
 Type: Steak Fry
 Reception Time: 7 p.m.
 Dinner Time: 8 p.m.
 Entertainment: To be chosen
 2. Thursday, April 27, 1972
 Type: ArMPAC Banquet
 Reception Time: 7 p.m.
 Dinner Time: 8 p.m.
 Program: To be decided
 3. Friday, April 28, 1972
 Type: President's Banquet
 Reception Time: 7 p.m.
 Dinner Time: 8 p.m.
 Program: To be decided

G. Sporting Events
 1. Golf Tournament
 Date: Wednesday, April 26, 1972. Time: 12 noon
 Chairman: Robert L. Hagan, M.D.
 Co-Chairman: Wilfred M. Potter, M.D.
 Financial Contribution: $100
 2. Tennis Tournament
 Date: Wednesday, April 26, 1972. Time: 1 p.m.
 Chairman: Everett Czerny, M.D.
 Co-Chairman: Mrs. Louise Crawford
 Financial Contribution: $100

H. Registration Fees — 1972

Mr. Robinson reported that ArMPAC requested that the promotion of the various "package deals" registration fees include tickets to the ArMPAC Banquet. Members of the Committee expressed some concern about this and resolved it by determining that they would have two "package deals" offers. They recommend that the registration fees for 1972 be as follows:

1. Grand Slam Package Deal for Two$60.00
 Includes: 2 Steak Fry tickets—Wednesday evening
 1 Thursday Breakfast Panel Ticket
 2 ArMPAC Banquet tickets—Thursday evening
 1 Friday Breakfast Panel ticket
 2 President's Banquet tickets—Friday evening
2. Grand Slam Package Deal for One$40.00
 Includes: 1 Steak Fry ticket—Wednesday evening
 1 Thursday Breakfast Panel ticket
 1 ArMPAC Banquet ticket—Thursday evening
 1 Friday Breakfast Panel ticket
 1 President's Banquet ticket—Friday evening
3. Small Slam Package Deal for Two$45.00
 Includes: Same as "Grand Slam Package Deal for Two" except for tickets to ArMPAC Banquet Thursday evening.
4. Small Slam Package Deal for One$35.00
 Includes: Same as Grand Slam Package Deal for One" except for ticket to ArMPAC Banquet Thursday evening.
5. Basic Registration Only$15.00
6. Breakfast Panel Tickets$ 3.50
 (If purchased separately and not part of items 1, 2, 3, or 4. — Basic Registration required before purchase.)
7. Steak Fry Tickets$12.00
 (If purchased separately and not part of items 1, 2, 3, or 4—Basic Registration required before purchase.)
8. ArMPAC Banquet Tickets$12.00
 (If purchased separately and not part of items 1, 2, 3, or 4.)
9. President's Banquet Tickets$12.00
 (If purchased separately and not part of items 1, 2, 3, or 4—Basic Registration required before purchase.)
10. Nonmember Registration—Arizona resident $25.00
 (no tickets)

11. Nonmember Registration—
Out-of-State resident $50.00
(no tickets)

1971 Registration Report

County Society	County Membership	No. of Members Registered	% of Members Registered
Apache	9	—0—	—0—
Cochise	34	7	20.6%
Coconino	36	10	27.7%
Gila	17	6	35.3%
Graham	7	2	28.6%
Greenlee	6	1	16.7%
Maricopa	1065	276	26.9%
Mohave	11	4	36.4%
Navajo	10	2	20.0%
Pima	442	59	13.3%
Pinal	33	6	18.2%
Santa Cruz	9	4	44.4%
Yavapai	27	7	25.9%
Yuma	39	6	15.4%
Members Sub-Total	1745	390	22.4%
Non-members M.D.'s*		110	
Doctors of Osteopathy		29	

Total Physician Registration 529
Non-Physician Registration** 316
Total Registration 845

*Breakdown of Non-Member M.D.'s

Interns & Residents	44
Guest Speakers	12
Out of State	35
In State	19
	110

**Breakdown of Non-Physician Registration

Exhibitors	149
Woman's Auxiliary	145
Medical Students	8
Others	14
	316

States and Countries Represented "Out-of-State" Group

California	1
Colorado	4
Canada	2
Florida	1
Idaho	1
Illinois	2
Indiana	2
Iowa	1
Kansas	2
Michigan	1
Minnesota	1
New Mexico	3
New York	2
Ohio	2
Oregon	1
South Dakota	1
Utah	3
Washington	3
Wisconsin	2
	35

1972 Exemptions

It was moved and carried that registration fee exemptions be offered to fifty-year club members, interns, residents, military physicians, registered nurses, medical and pre-medical students, members of the Woman's Auxiliary, exhibitors, press and guest orators.

Newcomer Program

It was moved and carried to continue the newcomer program as in previous years.

I. Scientific Exhibits and Woman's Auxiliary

It was determined that rooms A1 and A2 would be used for the House of Delegates on Tuesday and Saturday, Reference Committees on Wednesdays, and for Scientific Sessions on Thursday and Friday. Room A3 would be used for Scientific Exhibits, Woman's Auxiliary Art Show and, if space available, for additional commercial exhibits. This arrangement would provide for more room for scientific exhibits and the Woman's Auxiliary Art Show.

Mr. Robinson would arrange for layouts of the room to be made to determine how many additional exhibit spaces this would provide.

K. Commercial Exhibits

1. Fee

It was moved and carried that the commercial exhibit fee be continued at $300.

2. Booth Attendance Award

It was moved and carried that the booth attendance program be continued with a budget of $400.

3. Recesses

It was determined to continue thirty-minute recesses during morning and afternoon.

4. Guests

It was agreed that the exhibitors would again be invited to attend the steak fry as our guests and that they would be invited to attend other social functions at their own expense.

5. Exhibit Hall Hours

It was moved and carried that the exhibit hall hours be as follows:

Tuesday — 1 p.m. to 5 p.m.
Wednesday — 8 a.m. to 12 noon
Thursday — 8 a.m. to 5 p.m.
Friday — 8 a.m. to 4 p.m.

L. A. H. Robins Community Service Award

The Committee determined to recommend the continuance of this award program.

M. ArMA Continuing Education Certificate and AAGP Category Credit

It was determined that Dr. Robert Stark would be approached when the program is finalized to arrange for granting of the necessary credit hours for these two items.

N. Specialty Groups

The committee determined to recommend the continuance of the specialty society luncheons to be held on Tuesday, Wednesday, Thursday, Friday, and Saturday.

O. Scientific Program

The Chairman introduced Robert Barbee, M.D., Assistant Dean for Academic Affairs at the University of Arizona College of Medicine who will be the liaison between the College of Medicine and the Association in the development of the 1972 meeting.

A request from the Arizona Chapter of the American Academy of Pediatrics to have all pediatric subjects held on Friday of the meeting was discussed, but no determination was made.

A letter from Herbert A. Haessler, M.D., Vice-President and Medical Director of Searle Medidata Inc. was read by the Chairman. It was suggested that this organization be offered the opportunity to purchase an exhibit area for the display of their material.

Charles W. Vivian, M.D.'s request that the 1972 program include a speaker on allergy was received.

A discussion of the use of "local" papers ensued. It was suggested that when the announcement soliciting such papers is made that it goes out not only to the Director of Medical Education but also to the heads of the various programs in the various institutions. This would be in addition to direct letters to the interns and residents.

The committee recommended that two specific places on the program be set aside for papers originating from medical students, interns or residents and that some sort of an award, in addition to their expenses, be developed.

Dr. Levy indicated that he and the co-chairman, Dr. Potter, and Dr. Barbee would be meeting soon to work out a suggested format for the meeting, which would be the subject for discussion at the next meeting of the Scientific Assembly Committee.

CHOICE OF SCHOOL TO PROVIDE PROGRAM FOR 1973 MEETING

Following extensive discussion, it was determined that we would approach UCLA to see if they could and would be interested in providing the scientific program for 1973. Should they not be able to then, Stanford University would be approached.

COMMUNICATIONS

California Medical Association Letter 7/7/71

Roberta Fenlon, M.D., President, California Medical Association, letter of July 7 was reviewed. This letter was an invitation to the Arizona Medical Association to participate in "The First Western States Invitational Scientific Assembly" which would be part of the California Medical Association's Annual Scientific Assembly scheduled February 12-16, 1972 in the San Francisco Hilton Hotel.

Following extensive discussion, it was determined that further information should be sought. Such information would include a summary of their last year's meeting, with regard to physician attendance, scientific exhibits, commercial exhibits, and nonphysician attendance.

OTHER BUSINESS

Attendance Promotion

A variety of ideas were presented as to the best method to develop a greater attendance at forthcoming meetings. One subject of inviting those physicians outside of the State of Arizona was dealt with and the committee determined that they would approve a placement of an advertisement in the Rocky Mountain Medical Journal to this end, as long as it did not exceed the cost of $25.00.

Host Program

The advantages and disadvantages and problems relating to providing hosts to the guest speakers was discussed. It was noted that during the 1972 meeting this would not be a problem with the faculty coming from the University of Arizona College of Medicine, however, the determination as to future programs should be made. The committee decided that each should give this consideration and bring his ideas back to the next meeting of the Scientific Assembly Committee.

Moderators

The matter of assigning moderators to the various speakers was discussed. It was noted that ideally moderators should be of the same specialty as the subject matter being discussed at the session to which he is moderator. It was noted, however, that this is not always possible. Previous practice of attempting to obtain moderators from members of the Scientific Assembly Committee is to be continued as far as possible. It was also suggested that a "moderators" ribbon be obtained for the badges of those physicians who are serving as moderators.

"Feedback" as an Aid to Future Planning

For the benefit of future meetings, it was suggested that some "feedback" mechanism be developed for the 1972 meeting to assist the committee in determining the likes and dislikes of those attending the meeting. Such information could be used in developing plans for future meetings. This material would not only include the generalized format of the meeting, but the subject content, suggestions as to whether there should be in-depth seminars or a combination of seminars and half-hour presentations. This is to be a subject of discussion at the next meeting of the committee, as well as subject of discussion between Drs. Barbee, Levy, Potter and Mr. Robinson when they formulate the detailed plan for the scientific portion of the 1972 meeting.

Meeting adjourned at 12:12 p.m.

Edward Sattenspiel, M.D.
Secretary

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc., held Saturday, July 24, 1971, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 3:20 p.m., James L. Grobe, M.D., President and Chairman presiding.

MINUTES

Minutes of the meeting held 4/27/71 were approved as distributed.

YELLOW PAGES — CLINIC LISTING

Mr. Robinson read the letter from Mr. Earl C. Morse, Division Directory Manager, Mountain States Telephone as follows:

"Your letter of May 11, 1971 to Mr. Jolly has been referred to me for consideration and action. I appreciate your concern with the listings in the 'Clinics' classified heading section of our Arizona directories.

"While it is too late to make any changes in the Tucson directory that will be delivered in July, I have been considering re-evaluating our present policy and making changes beginning with the January, 1972, issue of the Phoenix directory. Such changes would include the re-establishment of separate classified headings for Medical Clinics, Osteopathic Clinics, Chiropractic Clinics, etc., and the corresponding elimination of the newly created classified heading 'Medical Groups.'

"As soon as we have made a firm determination we shall contact you and review the matter with you in detail. I do want you to know that we are concerned with your thoughts as well as those of Dr. Guarino and other physicians and surgeons from whom we have heard."

Received for information.

CODAC — REQUEST FOR FUNDS

The May 28, 1971 letter from Donald F. Jackson, Executive Director of CODAC requesting funds was received.

It was determined to advice CODAC that while ArMA could not contribute funds to local community activities of this type, we would make our mailing list available for a personal mail solicitation.

COUNCIL OF PROFESSIONS

The letter of 6/4/71 from Richard M. Arnold, President, Arizona Council of Professions requesting an appointment by ArMA to an Ad Hoc Committee on Civic Affairs of the Council was reviewed.

It was suggested that Robert S. Ganelin, M.D., Chairman of the Section on Public Health of the Professional Committee be asked to serve on this committee.

ATTORNEY GENERAL OPINION

Mr. Robinson reported that BOMEX had requested an Attorney General's opinion on the matter of chiropractors using X-rays and that said opinion has not been completed.

MEDITERRANEAN CRUISE SPONSORSHIP

It was agreed that ArMA sponsor various group travel programs for members through International Travel Advisors, Inc. of St. Louis, Missouri. It is understood that no expense be incurred by ArMA and that ArMA would realize the equivalent of one full fare for every 40 members who participate.

ATTENDANCE AT BOARD MEETINGS

Dr. Wagner's suggestion that Louis C. Kossuth, M.D., Commissioner, State Department of Health, be invited as a regular guest to all Board of Director's meetings was agreed to by the Committee.

ARIZONA PHARMACEUTICAL ASSOCIATION

The letter dated 6/15/71 from Frank White, Chairman, Interprofessional Relationships and Grievance Committee of the Arizona Pharmaceutical Association was reviewed.

It was determined that we should respond indicating that the physician involved is not a member of this Association and while we are sympathetic to the problem posed, we do not have jurisdiction.

REVIEW OF BOARD OF DIRECTORS AGENDA

The Executive Committee reviewed the agenda for the meeting of the Board of Directors scheduled for 7/25/71 and prepared various recommendations.

OTHER BUSINESS

California Medical Association's Invitation

A letter dated 7/7/71 from Roberta Fenlon, M.D., President, California Medical Association, inviting Arizona to participate in the "First Western States Invitational Scientific Assembly."

It was noted that the Scientific Assembly Committee is reviewing this matter and has asked for additional information.

Received for information.

FUTURE JOINT ArHA-ArMA EXECUTIVE COMMITTEE MEETINGS

General discussion ensued on the need for future meetings between the Executive Committees of the two Associations. It was determined that these meetings should continue especially when legislative matters of mutual concern develop.

WILLIAM H. GAULT, M.D.

Dr. Gault's recent request for an additional $500 loan was referred to this Committee by Dr. Cloud, Chairman of the Benevolent and Loan Fund Committee. It was pointed out that Dr. Gault has already been loaned $1000 to date.

The Committee determined to ask for a recommendation from Pima County Medical Society which has a committee dealing with physicians experiencing financial hardship. Mr. Robinson was instructed to follow through on this matter. If the Pima County Medical Society recommends the loan, the Executive Committee would concur.

Meeting adjourned 7:30 p.m.

Edward Sattenspiel, M.D.
Secretary

BOARD OF DIRECTORS

Meeting of the Board of Directors of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, July 25, 1971, a quorum being present, convened at 10:09 a.m., James L. Grobe, M.D., President and Chairman presiding.

WELCOME

Dr. Grobe welcomed the various guests and Paul B. Jarrett, M.D., gave the invocation.

MINUTES

The minutes of the meeting held on April 27, 1971 and May 1, 1971, were approved as distributed.

ArMPAC BOARD OF DIRECTORS

It was moved and carried that the following be appointed as members of the ArMPAC Board of Directors for the 1971-72 year:

REAPPOINTMENTS — TERM 1971-72

Don V. Langston, M.D., Chairman, Phoenix
Walter Brazie, M.D., Kingman
Earl A. Bronson, Jr., D.D.S., Phoenix
Joseph B. DeLozier, M.D., Phoenix
Doyle Hansen, D.D.S., Holbrook
Mrs. Clare W. Johnson, Phoenix
John F. Kahle, M.D., Flagstaff
Paul W. Kliewer, M.D., Wickenburg
Mrs. Robert B. Mason, Phoenix
William W. McKinley, Jr., M.D., Bisbee
Eugene A. Savoie, D.D.S., Tucson
Dale F. Webb, M.D., Yuma
Mrs. Lewis A. Winter, Phoenix

NEW APPOINTMENTS — TERM 1971-72

James Austin, M.D., Phoenix
Mrs. Charles E. Henderson, Phoenix
Arthur V. Dudley, Jr., M.D., Tucson

BOARD OF DIRECTORS HOUSE OF DELEGATES RESOLUTIONS STATUS REPORT

#1-71 — Highway Directional Signs for Emergency Medical Facilities

The June 2, 1971 letter from William N. Price, State Highway Engineer was read as follows:

"This is in reply to your letter of May 21, 1971 with which you transmitted a copy of Resolution 1-71 of

the House of Delegates of the Arizona Medical Association on the subject of highway directional signs, emergency medical facilities, and a copy of the proposed signs identifying emergency medical facilities.

Since much of the travel on the highways in Arizona is of an Interstate nature, it is essential that a system of uniform signs be adopted and universally used through Arizona, as well as, throughout the United States. Because of this need for uniform signing, very rigid standards are prescribed for signing of all highways within the State of Arizona. The Manual for Signing and Pavement Marking of the National System of Interstate and Defense Highways, published by the American Association of State Highway Officials, provides the standards for signing all Interstate highways in Arizona. The Manual on Uniform Traffic Control Devices for Streets and Highways, published by the National Joint Committee on Uniform Traffic Control Devices, which has been adopted as the Arizona State Manual, prescribes signing standards for all non-Interstate roadways within the State of Arizona. These two documents do provide for the standard "Hospital" signing, but do not include the emergency medical facilities signing which you have suggested for use in the State of Arizona.

It is suggested that the Arizona Medical Association, Inc., through their national organization, make their position known to the agencies responsible for establishing the above-mentioned signing standards. To be effective, emergency medical facilities signs must be uniform on a national basis rather than a local or regional basis.

Your interest in effective highway directional signs in the State of Arizona is appreciated, and we hope that we may be of service in the future."

Received for information.

#2-71 — Continuing Medical Education

It was reported that the Medical Education Committee has been very active in developing program information, but nothing has been finalized at this time.

#4-71 — A Department of Family Practice

Dr. Grobe reviewed the letter from Norman G. Sharber, President, Arizona Board of Regents dated June 18, 1971, and Richard A. Harvill's letter of May 29, 1971. The latter letter is reproduced in its entirety below:

"Dear Dr. Sharber:

"Dean DuVal has sent me a copy of the letter of May 21 addressed to you from the Secretary of the Arizona Medical Association in which he indicates that the House of Delegates of that Association recently adopted a Resolution, a copy of which was enclosed, recommending that a Department of Family Practice be eventually established in the College of Medicine at the University of Arizona. He emphasizes the importance of getting under way in this endeavor in the near future.

Dean DuVal and I have talked about this matter, and we believe that the organization and the planning of the College of Medicine in effect already contains an arrangement that emphasizes family practice. Indeed, the College of Medicine is already well under way in its program of family medicine. The Department of Community Medicine in the College of Medicine has recently been upgraded to a Department of Family and Community Medicine with jurisdiction over the Neighborhood Health Center and the Model Family Practice Programs that are currently being added to the Department.

While the head of the Department is Dr. Herbert K. Abrams, the Family Practice Program is being developed under the leadership of Dr. Jesse Tapp. Dr. Tapp is Associate Professor of Family and Community Medicine. He was born in 1930 in New York City, received his bachelor's degree from Stanford University in 1952 and his M.D. degree from the University of Chicago in 1955. He subsequently received a master's degree in public health from the Harvard School of Public Health. It is also important to take note of the fact that Dr. Tapp was in the general practice of medicine for six years, from 1956 to 1961, when he joined the College of Medicine at the University of Kentucky where he has been serving in the Family Practice and Community Medicine Program.

Certainly we believe that the steps taken by the College of Medicine represent large and ample investment and commitment on our part to family medicine at this time."

Jack M. Layton, M.D., Acting Dean, University of Arizona, College of Medicine, expanded on additional steps taken by the College of Medicine as follows:

"The Department name has been changed to the Department of Family and Community Medicine. There is a family practice residency program going on now with one person. Four more are expected next July and three more family practices are in the budget for that program beginning next July. There are 15 full time physicians in the Department with at least 8 engaged directly in the teaching of family medicine. Next year the proportion will be higher. In next year's budget the Department of Family and Community Medicine has received a substantially greater portion of increase than any other department in the College of Medicine. There are 9 family practitioners in Arizona who have Associate appointments in the College and more will be made soon. Recently Dr. Anthony Vuturo, who is a family practitioner and assistant professor has joined the Department. He is certified by the American Board of Family Practice. The family practice program is headed by Dr. Jesse W. Tapp, Jr., who was a family practitioner for several years and was involved in the family practice program at the University of Kentucky. First year medieal students are having a new course in family practice this year in which they will spend at least two hours every other week with family practictioners in the Tucson community. There are four seniors taking electives in family practiee this year. We have a model private family practice in Tucson under development for the medical students in cooperation with Dr. David R. Minter and his associates. There are two rural family practices being developed as models. One at Marana, which is already in existence and the other at Casa Grande which will soon be implemented. Students have been involved in both of these for the past six months. There are 15 students from the Class of 1974 working with the Department of Family Practice this summer. Three of them working with the development of the Marana model and one working in a family practiee partnership in Tucson. The college is also developing

programs in continuing medical education for family practitioners around the State. I do think that what the school is doing with regard to the Resolution #4-71 was not fully explained in the above letter from the regents."

Dr. Grobe complimented Dr. Layton on the steps that have been taken by the College in response to the expressed desires of the Association.

#5-71 — Current Procedural Terminology

Dr. Grobe reviewed the following letter on the entitled subject received from Arizona Blue Cross/Blue Shield:

"On May 26th you wrote to Doctor Grobe concerning the House of Delegates' Resolution No. 5-71 entitled 'Current Procedural Terminology.'

Arizona Blue Shield is currently considering the recommendation but is awaiting national acceptance by National Blue Shield, which should be forthcoming by the first of the year. It is imperative that we coordinate our actions with other plans so that we can handle National Accounts using the same procedural codes."

Received for information.

#7-71 — Ameriplan

Dr. Grobe noted that we had received letters from Senators Fannin and Goldwater and Representative Steiger who indicated that they were co-sponsors of the AMA's Medicredit proposal. Responses were also received from Representatives Rhodes and Udall thanking the Association for advising them of our position on Medicredit.

#8-71 — Part B — Intermediary Letter No. 70-32 dated November, 1970

Mr. Robinson reminded the Board that this Resolution was to be forwarded to the AMA for assistance. The AMA House of Delegates adopted a very similar Resolution at their Annual Meeting June 22, 1971.

#9-71 — SS Amendments Relating to Peer Review

Mr. Robinson reported that a special advisory group had been formed to prepare recommendations to the Board. This group has met and additional meetings are planned.

#10-71 — Medical Education Committee Orientation

#11-71 — Pollution Control

It was reported that these Resolutions were referred to Committees that have not had an opportunity to meet.

Governor's Appointments

It was reported that C. Herbert Fredell, M.D., has been appointed to the State Board of Health for a term ending February 1, 1973 and that Richard L. Dexter, M.D., has been appointed to the Board of Medical Examiners for a term ending July 1, 1976.

Abortion Law Initiative

Robert H. Tamis, M.D.'s letter of May 13, 1971 and the Planned Parenthood Association of Phoenix Inc.'s letter of May 11, 1971, were reviewed. Both letters requested the Association's endorsement of a petition directed toward liberalization of the abortion law in Arizona.

It was moved and carried that this Association approve the initiative measure as presented with the phrase "except that a licensed physician may perform an abortion otherwise lawful at any place he reasonably deems to be medically proper when he acts under a reasonable belief that the abortion is performed within twelve weeks from the commencement of the pregnancy" be deleted. That is if this phrase is not deleted, the Association would oppose the initiative. [The above quote phrase appears as the last part of paragraph A under Section 13-212 on Page I of the initiative measure.]

Ad Hoc Committee on Meeting Arizona's Medical Needs

Dr. Grobe expressed this concern for the need to appoint a Committee on the subject matter. The charge to this Committee would be:

"Identify and quantify the defects that may exist with respect to access to, and distribution of, health services. It should propose professional solutions to correct any deficiency noted."

It was moved and carried that this committee be created and that the following be appointed to the committee:

1. Paul B. Jarrett, M.D. — Maricopa — Chairman
2. William R. Myers, M.D. — Maricopa
3. Wallace A. Reed, M.D. — Maricopa
4. Oscar A. Thorup, Jr., M.D. — Pima
5. Seymour I. Shapiro, M.D. — Pima
6. Deward G. Moody, M.D. — Santa Cruz
7. John E. Oakley, M.D. — Yavapai
8. Augusto Ortiz, M.D. — Maricopa — or his designee

That should one or more be unable to serve, the Executive Committee would have authority to approve additional appointments.

Ad Hoc Committee on ArMA Program Development and Administrative Evaluation

Dr. Grobe explained to the Board why he felt the above captioned committee should be created. He indicated that the charge to the committee be:

"Evaluate communication between the state and its constituent chapters, study and evaluate programs at both levels and propose ways to make our organization more effective and responsive to our needs."

It was moved and carried that this committee be formed and that the following be appointed to the committee:

1. W. Albert Brewer, M.D. — Maricopa — Chairman
2. Patrick P. Moraca, M.D. — Maricopa
3. W. Scott Chisholm, Jr., M.D. — Maricopa
4. Richard L. Dexter, M.D. — Pima
5. George W. King, M.D. — Pima
6. James F. Martin, M.D. — Yuma
7. David D. Smith, M.D. — Coconino or
 John E. Hildebrand, M.D. — Coconino

That should one or more be unable to serve, the Executive Committee would have authority to approve additional appointments.

AMA Councils and Committees — Nominees

It was moved and carried that the following names be submitted as nominees for membership on the indicated councils and committees of AMA:

1. Robert I. Cutts, M.D. — Council on Mental Health
2. William J. Dunn, M.D. — Committee on Alcoholism and Drug Dependence
3. Richard O. Flynn, M.D. — Council on Legislation
4. Paul B. Jarrett, M.D. — Council on Drugs
5. Eugene J. Ryan, M.D. — Council on Occupational Health

EXECUTIVE COMMITTEE

Financial Statement for Period Ending June 30, 1971

Dr. Scott, Treasurer, reviewed the subject financial statement in detail.

It was moved and carried to increase the budget for Account 506, Tel & Tel by $3,000.00 and Account 524, Furniture & Fixtures by $13.27.

It was moved and carried that this Association subsidize Paul B. Jarrett, M.D., up to $25.00 per day while he serves on the HEW Secretary's Commission on Medical Malpractice to which he was recently appointed.

Bequeaths

Dr. Scott suggested that we develop a program urging members to include the Association in their Wills.

Membership Classification Changes Approved

Maricopa County

a. A. F. Dorner, M.D., Active to Active Over 70 — Account Age — effective 1/1/71 — Dues exempt.
b. Jasper N. Knox, M.D., Active to Active Over 70 — Account Age — effective 1/1/71 — Dues exempt.
c. Franklin B. Laneback, M.D., Active to Associate — Account Illness — effective 1/1/71 — Dues exempt.
d. Jacob M. Sobol, M.D., Active to Associate — Account Further Training — effective 1/1/71 — Dues exempt.

Pima County

a. Merlin K. DuVal, Jr., M.D. — Request for refund of half-year dues ($60.00).
b. Walton C. Finn, M.D. — Deceased — Request for refund of years dues made by estate ($120.00).
c. Darrell E. Hayhurst, M.D., Active to Active Over 70 — Account Age — effective 1/1/71 — Dues exempt.
d. William J. Liccione, M.D. — Request for 1971 dues exemption due to financial hardship — effective 1/1/71.

Yuma County

a. Charles Powell, M.D., Active to Associate — Account retired — effective 1/1/71 — Dues exempt.
b. Robert Rider, M.D., Active to Associate — Account retired — effective 1/1/71 — Dues exempt.

BENEVOLENT & LOAN FUND COMMITTEE

Letters of appreciation for the Association's financial assistance in various student programs were received from George H. Adams, M.D., Ph.D., Assistant Dean for Student Affairs; Merlin K. DuVal, M.D., Dean and Todd H. Overton, J.D., M.D. — Received.

Appointment

It was moved and carried that Jack M. Layton, M.D., Acting Dean, be appointed to the Benevolent & Loan Fund Committee, replacing Merlin K. DuVal, M.D.

Dr. Layton, being present, accepted the appointment.

MEDICAL EDUCATION COMMITTEE

The recommendation of the Medical Education Committee that the television program series be discontinued was discussed.

It was moved and carried that the medical television programs sponsored by the Association be discontinued at the end of the current series.

OCCUPATIONAL HEALTH COMMITTEE

Dr. George W. Nash's letter of May 11, 1971 and Dr. Walter Edward's letter of June 4, 1971, were reviewed along with this committee's recommendation to the ICA regarding the new fee schedule to be negotiated.

The subject of the first two letters dealt with the actions of certain Phoenix anesthesiologists who have chosen not to provide services to elective ICA cases.

A letter dated April 21, 1971, from Carl A. Nau, Jr., M.D., President of the Arizona State Society of Anesthesiologists, setting forth the position of that group was read into the record as follows:

"Dear Dr. Sattenspiel:

'I am writing in reply to your letter of March 1, 1971 regarding anesthesia services to Industrial Commission Cases in the Phoenix area.

I have consulted with various members of the Arizona Society of Anesthesiologists, both in Phoenix and in other communities. There is general agreement that the Industrial Commission should not expect to secure the services of any physician for less than the usual and customary fee.

In a meeting with the Chairman of the Economics Committee of the Arizona Medical Association, the Industrial Commission was advised that physicians treating industrial cases should be paid their usual fees. An opinion by the Attorney General held that a fixed fee schedule was legally required; therefore the Economics Chairman advised the Commission of the schedules and conversion fatcors which would most nearly approximate U & C fees. In the case of Anesthesiology, this was ASA Relative Value Guide of 1967 using an $8.00 conversion factor. Despite this the commission adopted a $7.00 unit for anesthesia.

In view of this, it is hardly surprising that the fee schedule adopted by the ICA was deemed unsatisfactory by many anesthesiologists. Their recourse was to stop administering anesthesia to elective industrial cases. It is certainly their right to do so. Apparently, only in Phoenix are there a sufficient number of industrial cases that such an action was deemed necessary.

Frankly, I can see no reason why the Industrial Commission should expect quality medical care for cut rates. Certainly it is not lack of money, for they recently returned to employers an excess of $2.5 million from the State Compensation Fund.

In conclusion, the Arizona Society of Anesthesiologists fully supports the position of the Phoenix members. The solution to the problem, if one exists, is for the Industrial Commission to revise its fee schedule promptly. Indeed, its failure to do so may result in a diminution of the quality of care of industrial cases for treatment is doubtlessly unduly prolonged."

Much discussion ensued.

It was moved and carried that the Arizona Medical Association does not endorse actions by any professional group which interfere with the patient's access to health care services.

It was moved and carried that representatives of this Association meet with representatives of the Arizona State Society of Anesthesiologists as soon as possible to try to work out a mutually acceptable solution to the problem. The Association's representatives are to be:

1. John J. Standifer, M.D., Chairman
2. Joseph M. Hughes, M.D.
3. Paul B. Jarrett, M.D.
4. Eugene J. Ryan, M.D.
5. Edward Sattenspiel, M.D.

It was moved and carried that the Occupational Health Committee may negotiate a new ICA fee schedule on the following basis:

CONVERSION FACTORS

1964 CALIFORNIA RELATIVE VALUE SCHEDULE

Medicine	8.0
Surgery	7.0
Radiology	7.0
Pathology, Anatomical	8.0
Laboratory	6.0

1970 ASA RELATIVE VALUE SCHEDULE

Aanesthesiology	8.0

PROFESSIONAL COMMITTEE

The appointment of George A. Spendlove, M.D., to the Professional Committee as Chairman of the Section on Rehabilitation was approved. The designation of Rudolf Kirschner, M.D., (previously appointed to the Committee) as Chairman of the Section on Drug Abuse was approved.

PUBLIC RELATIONS COMMITTEE

Lamar Owens, Public Relations Consultant, reviewed in detail the public relations program relating to the 1971 Annual Meeting. The following is a financial summary of coverage:

SUMMARY

Overall commercial value of time and space provided by statewide communications media is placed at:

$ 7,750	Radio
$ 7,620	Newspaper
$28,440	Television
$ 800	Magazine
$44,610	TOTAL

Probably more important is the favorable relations created, and commented on with media management and newsmen.

SCIENTIFIC ASSEMBLY COMMITTEE

It was moved and carried that the general format for the 1972 Annual Meeting be approved as outlined in the minutes of the Scientific Assembly Committee meeting of July 11, 1971.

AMA DELEGATES REPORT

Dr. Cloud reviewed, in some depth, the AMA meeting held in Atlantic City in late June. He noted that nearly all the proceedings appear in recent issues of American Medical News. Drs. Shapiro and Jarrett also commented on various aspects of the meeting.

OTHER BUSINESS

Travelers Program

Mr. Robinson reported that 821 physicians have signed up to participate in the new program. He indicated that this was approximately 60% of the eligible members which puts us well ahead of the anticipated participation schedule.

Dr. Jarrett expressed concern that he did not feel that adequate arrangements had been made with the firm of O'Connor, Cavanagh, Anderson, Westover, Killingsworth & Beshears, as had been promised by Travelers. Mr. Robinson was instructed to follow through on this matter as soon as possible.

Statement of Purpose — Steering Committee for Statewide Master Planning for Nursing in Arizona

Dr. Payne reviewed the Statement of Purpose of the subject group which reads as follows:

"This is a proposal for the development of a framework for a statewide plan for nursing in Arizona to the end that nursing may become increasingly more responsive to the health needs of people. The ultimate goal is nursing service of high quality and in the amount required. An honest effort has been made to utilize available data which has implications for nursing care and to generate additional data required for rational planning. While the shortcomings of nursing have been faced with candor emphasis is given to its great potential for improving the health and well being of people whether they are rich or poor, live in urban or rural areas, need preventive or curative services or are identified with majority or minority groups with diverse culture and life style.

The plan will be action oriented with activities evolving from objective data rather than from emotions, obscure whims, or expedience. The proposal includes a description of the geographic setting of Arizona, size and composition of the population, the development of nursing in the state and an assessment of the present status of nursing which forms the background for future progress. Planning will focus on the following areas:

1. Analyze sources of recruits for nursing with new approaches for developing hitherto untapped human resources.
2. Encourage innovations in educational programs which will foster development of the individual practitioner while preparing the numbers and types of nurses needed to fulfill nursing's obligation to society.
3. Devise ways of making practice more effective through growth stimulating in-service programs and up-dating continuing education activities.
4. Engage in discovery studies of nursing in order to obtain answers to questions regarding practice for which only empirical data are now available.
5. Initiate study among health service practitioners in order to establish collaborative activities between and among them that will enhance their services to people.
6. Promote legislation relevant to nursing practice designed to foster better health services.

Admittedly much of the proposed planning will represent the extension or continuation of activities already underway but with more pressure for action, innovation, and excellence than has characterized them in the past.

The new ingredients are:

1. Expanded efforts to include allied health personnel and consumers of health services in planning for the improvement of nursing.
2. Greater thrust toward discovery of new nursing data based on experimentation and careful evaluation.
3. Relaxed and flexible attitudes toward change coupled with insistence that change derive direction from factual data which have stood the test of evaluation."

Dr. Payne indicated that the Arizona State Board of Nursing has requested our approval.

It was moved and carried that this Association approve the statewide master planning for nursing in Arizona project.

Board of Medical Examiners

Mr. Boykin indicated that BOMEX is anticipating the resignation of one of its members due to ill health and the ArMA Board of Directors may want to prepare a list of possible nominees for replacement to be submitted

to the Governor should this resignation materialize.

It was moved and carried that the following names be submitted:

1. E. Charles Bill, M.D. — Yavapai
2. Richard B. Johns, M.D. — Gila
3. Glen H. Walker, M.D. — Pinal

with the following as alternates should any of the above decline to be nominated:

1. William W. McKinley, Jr., M.D. — Cochise
2. John J. Standifer, M.D. — Mohave

Meeting adjourned 12:54 p.m.

Edward Sattenspiel, M.D.
Secretary

SPECIAL COMMITTEE ON OCCUPATIONAL HEALTH

The meeting of the Special Committee on Occupational Health appointed by the Arizona Medical Association's Board of Directors held at 810 West Bethany Home Road, Phoenix, Arizona, on Wednesday, July 28, 1971, convened at 8:12 p.m., John J. Standifer, M.D., Chairman, presiding.

REVIEW

The Committee reviewed the correspondence received from various Anesthesiologist groups, the Industrial Commission and the Arizona State Society of Anesthesiologists letter dated April 21, 1971, plus the action of the Arizona Medical Association's Board of Directors on July 25, 1971. They also reviewed the comparisons of the ASA Relative Value Guide of 1967 and 1970 as well as the 1964 edition of the California Relative Value Studies and the information relating to the current Industrial Commission of Arizona fee negotiations to take place on August 10, 1971 and the payment practices for Anesthesia of various insurance carriers. Dr. Nau, President of the Arizona State Society of Anesthesiologists reviewed the history of negotiations with ICA beginning with 1966 outlining the differences between the customary charge of the individual Anesthesiologists and that which was allowed by the Industrial Commission.

After considerable discussion it was moved and carried that the committee go on record recommending to the Occupational Health Committee that, effective immediate, the ICA Fee Schedule for Anesthesiologists be calculated at a conversion factor of 8. on the 1967 American Society of Anesthesiologists Relative Value Guide. On December 1, 1971, the ICA fee schedule be as follows:

CONVERSION FACTORS

1964 CALIFORNIA RELATIVE VALUE SCHEDULE

Medicine 8.0
Surgery 7.0
Radiology 7.0
Pathology, Anatomical 8.0
Laboratory 6.0

1970 ASA RELATIVE VALUE GUIDE

Anesthesiology 8.5

Henceforth, all fee requests of the Industrial Commission of Arizona by all specialties will be made through the Occupational Health Committte of the Arizona Medical Association and based on the current cost of living and the current cost of practice.

Meeting adjourned 10:54 p.m.

Edward Sattenspiel, M.D.
Secretary

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AN INVOLVED MEMBERSHIP IS THE BASIS FOR AN EFFECTIVE ASSOCIATION.

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Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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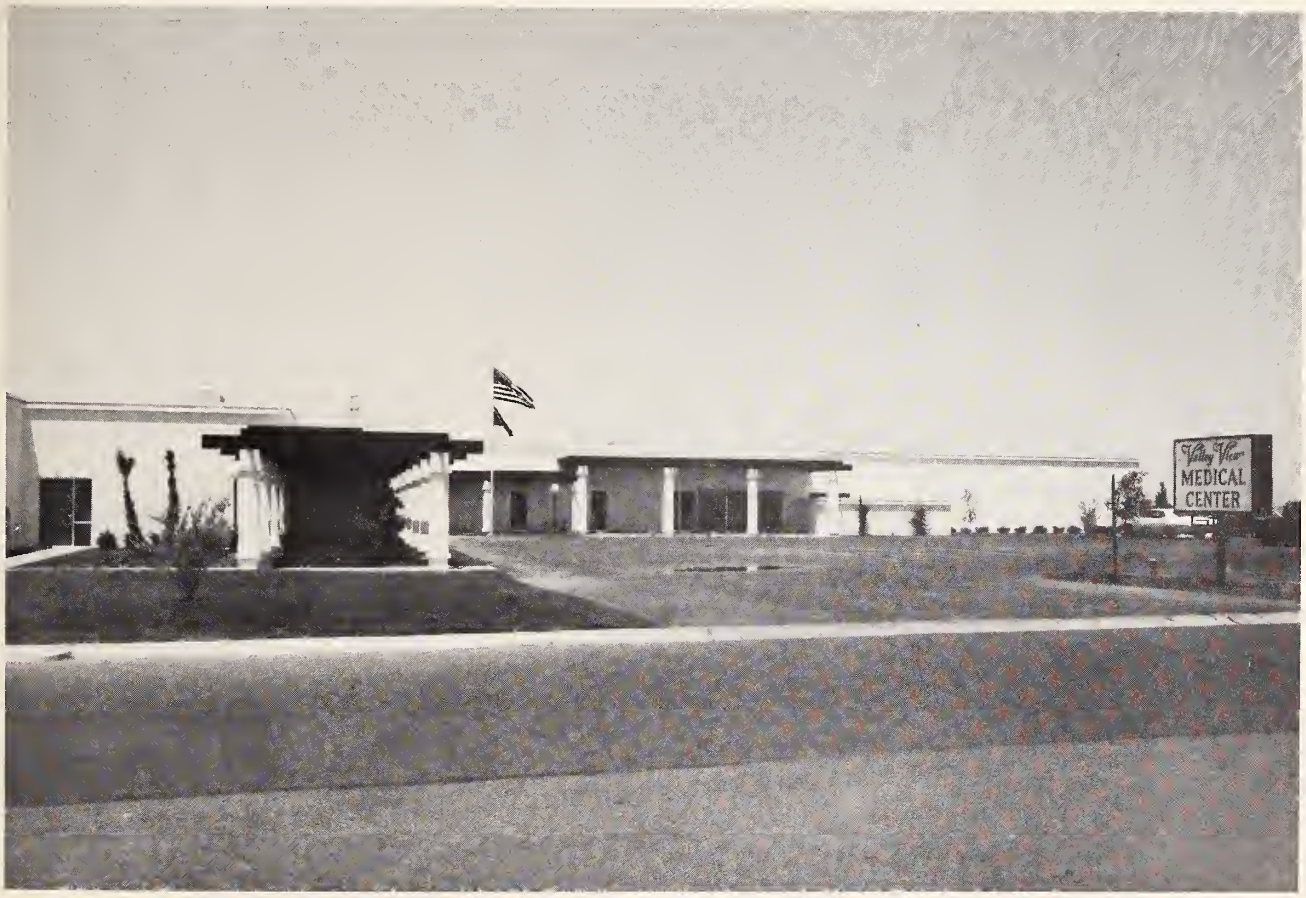
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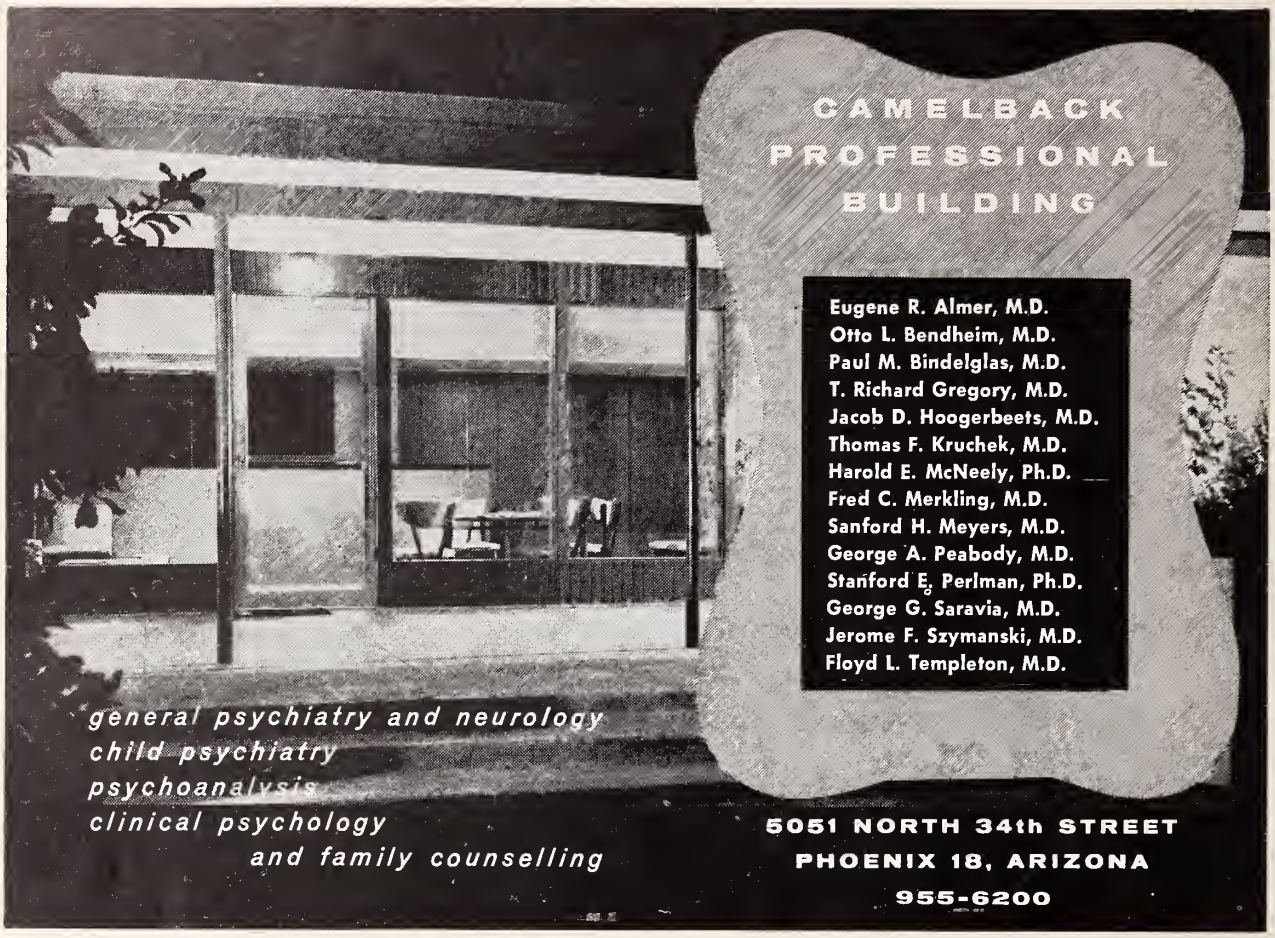
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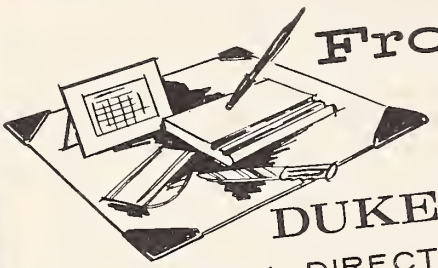
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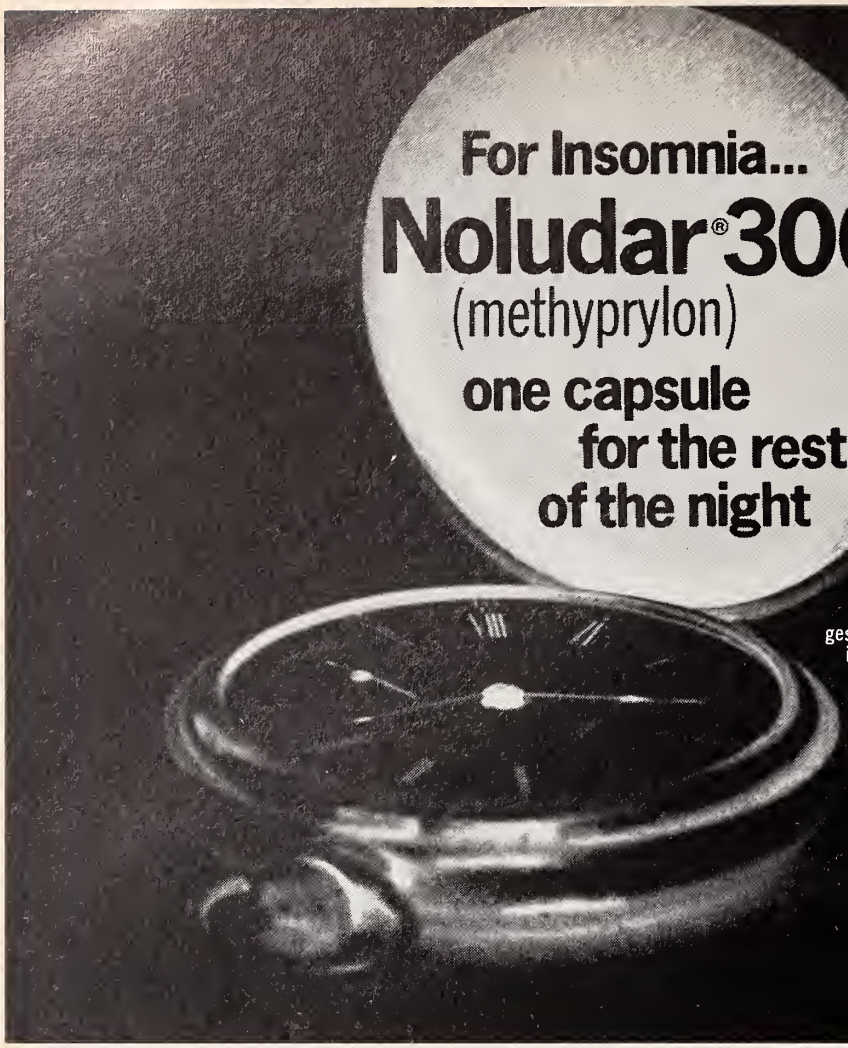
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CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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J. Enoch Powell, chief of the British National Health Service from 1960 to 1963, will be in the United States on October 8, 1971, to address the annual meeting of the Association of American Physicians and Surgeons. The meeting will be in Clayton, Mo., a suburb of St. Louis.

The ex-Minister of Health in Great Britain is regarded as the world's leading authority on politically controlled medicine. After trying for three years to make the British national health plan work, he now admits it is an inherent failure. He will explain the nature of that failure during the 3-day AAPS meeting in October. In addition, he will examine the whole network of connections between medicine and politics.

Powell has remained close to British politics since leaving his position as Minister of Health, and currently is a member of Parliament, representing an industrial district centering on Wolverhampton, England. He is the author of several books, including *Medicine and Politics.*

AAPS is a voluntary association of private physicians organized to maintain and improve high-quality medical care in the United States. It represents doctors in 1,300 counties and all 50 states. For additional information contact: Mr. Frank K. Woolley, Executive Director, Association of American Physicians and Surgeons, Inc., 230 N. Michigan Ave., Chicago, Illinois 60601.

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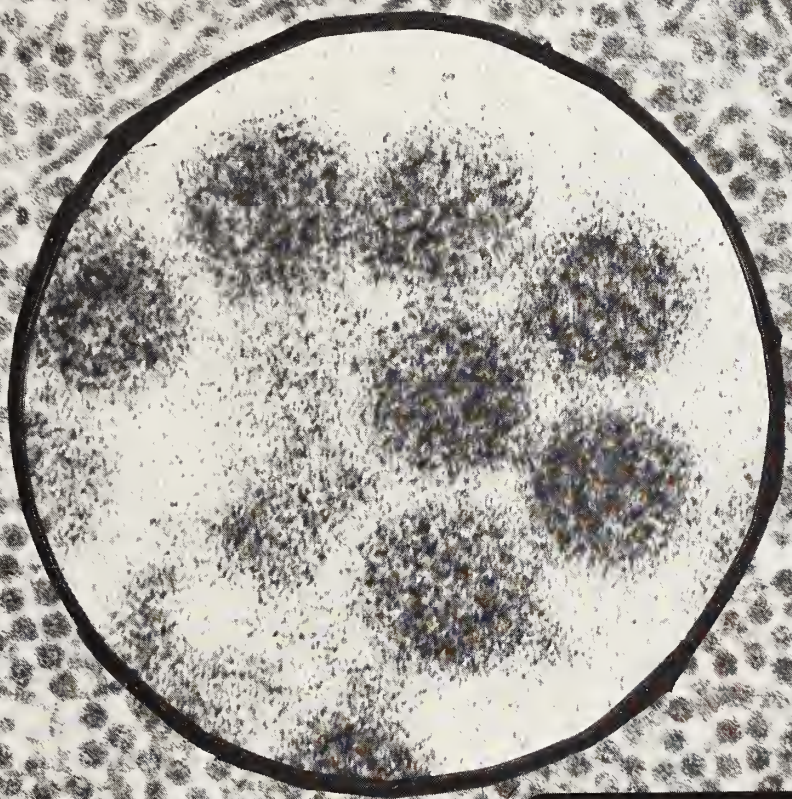
Ten thousand battered children– a growing medical problem?

In his daily practice the physician witnesses the human suffering caused by uncontrolled fertility. Perhaps one of its most tragic effects is the unwanted child, who so often experiences parental rejection. The rejected child in a family may be neglected, nagged and severely punished. Sometimes he is criminally abused. Child abuse is common enough to have become a separate clinical entity: the "battered child" syndrome. Reliable statistics are difficult to obtain, but it has been estimated that in this country alone roughly 10,000 children are "battered" per year, and their number may be increasing.

A revealing picture of child abuse patterns is provided by one study of the American Humane Society. More than half of the 662 children involved (all reported in newspapers within a single year) were less than 4 years of age. One fourth of the battered youngsters died; most of these deaths were of children less than 2 years of age. Fathers were more often guilty of child abuse than mothers, but sometimes both parents participated. The study indicated that battered children are not limited to any particular socioeconomic stratum.

***For the complete brochure, and others in the series as they appear, please write to Searle or ask your Searle representative.** Explored in the forthcoming issues will be the history of birth control, the influence of poverty, ethnic factors and marital status, its role in illness, its genetic implications and its effects on the emotional and behavioral life of the individual.

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ARIZONA MEDICINE

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Call it what you will, it may be premalignant

Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



and Efudex® (fluorouracil) 5% cream can resolve it.

Call it actinic, solar or senile keratoses, many regard it as "precancerous."[1,2]

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,[3,4] offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these mutliple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.[5] Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.[6]

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.[5] The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.[6]

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T, and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. 3. Belisario, J. C.: *Cutis*, *6*:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, *97*:14, 1968. 5. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and Klein, E.: *Cancer*, *25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

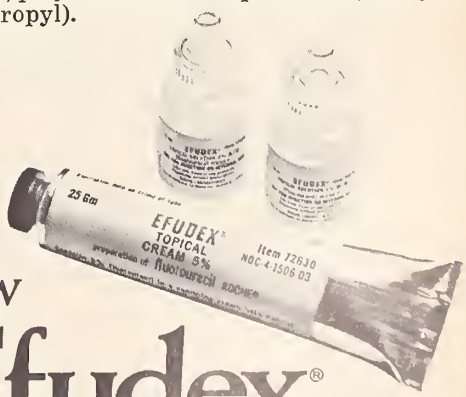
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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(fluorouracil)

cream/solution

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Published monthly by The Arizona Medical Association, Inc., with offices at 810 W. Bethany Home Rd., Phoenix, Arizona 85013. Subscription $5 a year, single copy 50 cents. Second class postage paid at Phoenix, Arizona, and at additional mailing offices.

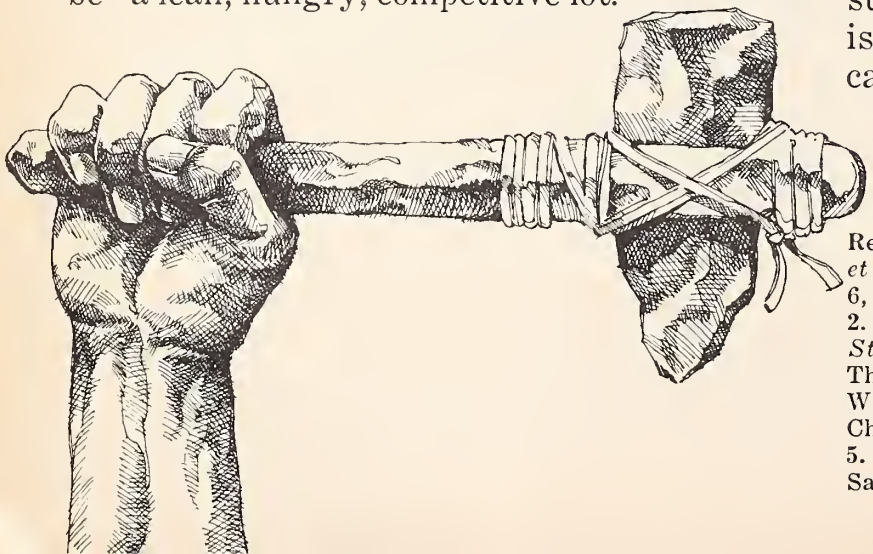
IF MORE MEN CRIED



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



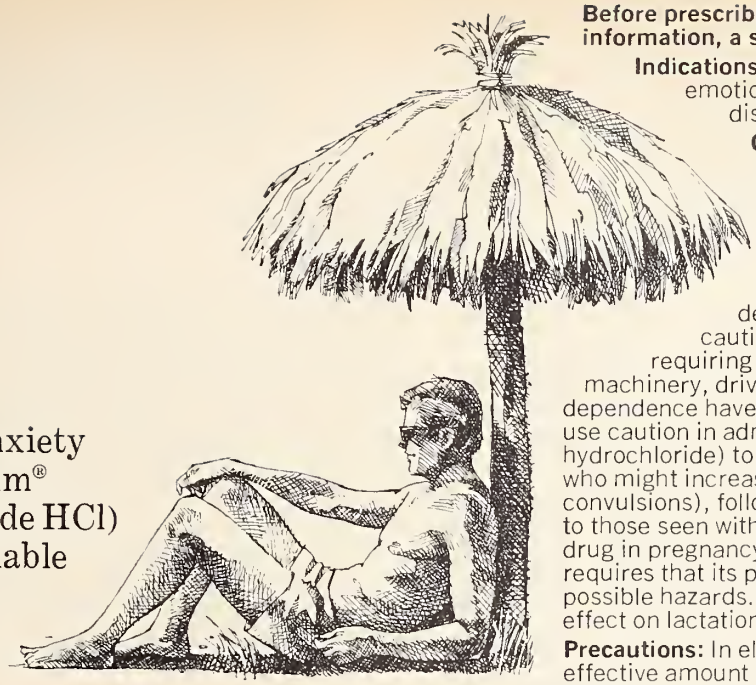
Big boys don't cry. If more men cried, maybe fewer would wind up with duodenal ulcers. But men will be men—the sum total of their genes and what they are taught. Schottstaedt observes that when a mother admonishes her son who has hurt himself that big boys don't cry, she is teaching him stoicism.[4] Crying is the negation of everything society thinks of as manly. A boy starts defending his manhood at an early age.



Take away stress, you can take away symptoms. There is no question that stress plays a role in the etiology of duodenal ulcer. Alvarez[5] observes that many a man with an ulcer loses his symptoms the day he shuts up the office and starts out on a vacation. The problem is, the type of man likely to have an ulcer is the type least likely to take long vacations or take it easy at work.

The rest cure vs. the two-way action of Librax.® For most patients, the rest cure is as unrealistic as it is desirable. Still, the stress factor must be dealt with. And here is where the dual action of adjunctive Librax can help. Librax is the only drug that com-

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. M., *et al.* (eds.): *Harrison's Principles of Internal Medicine*, ed. 6, New York, McGraw-Hill Book Company, 1970, p. 1444. 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolff's Stress and Disease*, ed. 2, Springfield, Ill., Charles C Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottstaedt, W. W.: *Psychophysiologic Approach in Medical Practice*, Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 163. 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. B. Saunders Company, 1951, p. 384.



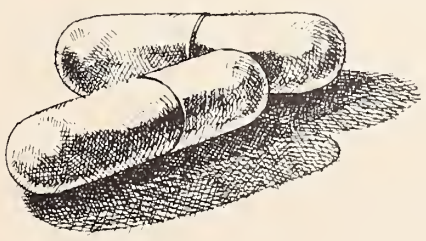
ines the antianxiety
ction of Librium®
chlordiazepoxide HCl)
ith the dependable
ntisecretory/
ntispasmodic
ction of
uarzan® (clidinium Br).

Protects man from his own hungry personality. The action of Librium reduces anxiety—helps protect the vulnerable patient from the psychological overreaction to stress that clutches his stomach. At the same time, the action of Quarzan helps quiet the hyperactive gut, decreasing hypermotility and hypersecretion.

An inner healing environment with 1 or 2 capsules, 3 or 4 times daily. Of course, there's more to the treatment of duodenal ulcer than a prescription for Librax. The patient—with your guidance—will have to adjust to a different pattern of living if treatment is to succeed. During this adjustment period, 1 or 2 capsules of Librax 3 or 4 times daily can help establish a desirable environment for healing.

Librax: It can't change man's nature. But it can usually make it easier for men to cope with the discomfort of stress—both psychic and gastric—that can precipitate and exacerbate duodenal ulcer.

Librax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

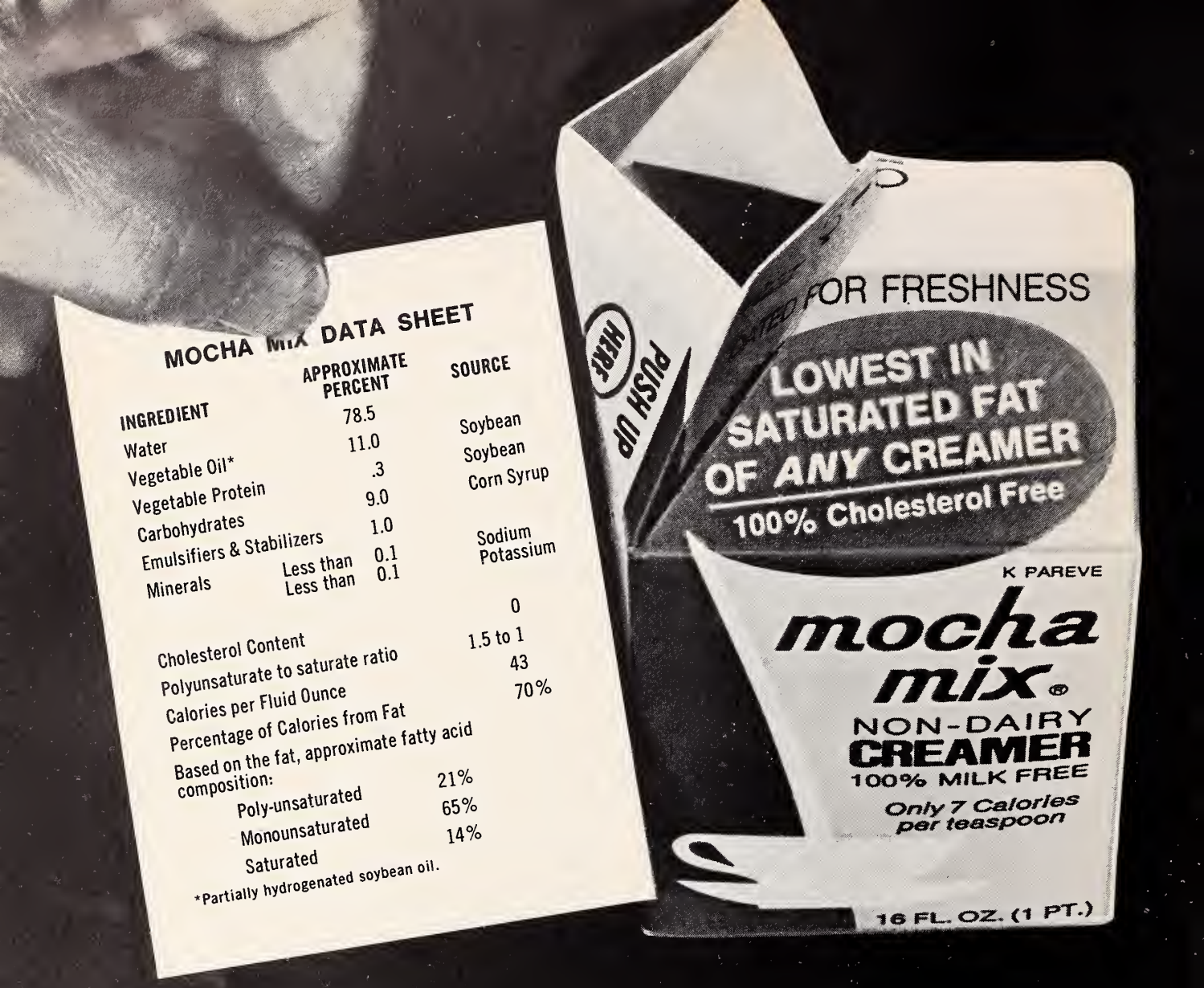
in the treatment of duodenal ulcer adjunctive

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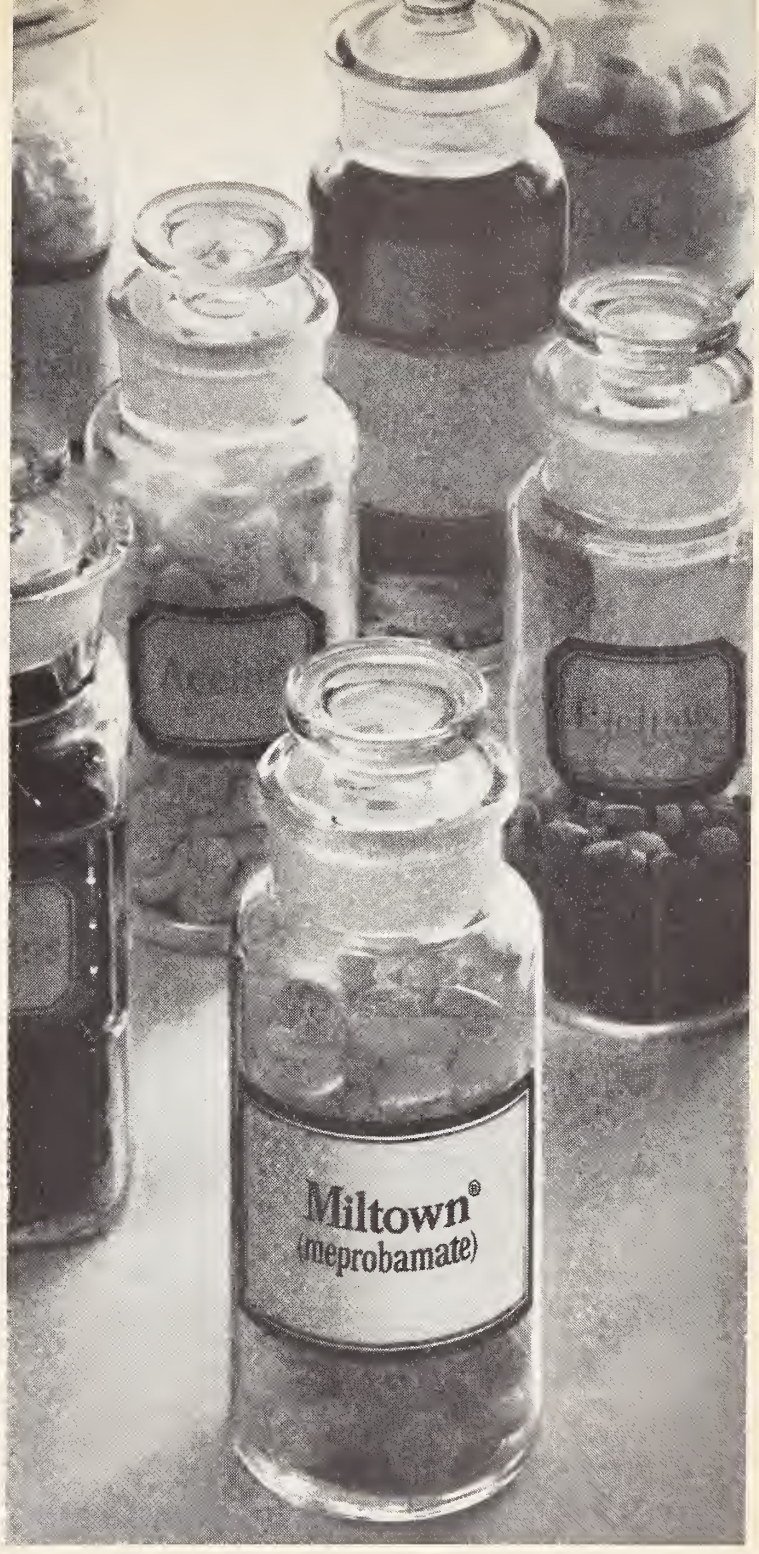
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The concert was just underway,
When to the conductor's dismay
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Each fluid ounce contains: Kaolin, 6 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

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Each 5 cc. contains:

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ROBITUSSIN A-C®	●	●			
ROBITUSSIN-DM®	●		●		●
ROBITUSSIN-PE®				●	●
COUGH CALMERS®	AHR		AHR		AHR

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(phenformin HCl)

timed-disintegration capsules

- a higher dosage strength for use in the overweight, maturity-onset diabetic if diet alone fails
- a biguanide...not a sulfonylurea
- new dosage flexibility
- low patient cost

new DBI®-TD 100 mg.
(phenformin HCl)
timed-disintegration capsules

lowers elevated blood sugar

Secondary to its blood sugar lowering effect, DBI-TD probably decreases insulin oversecretion and thus may help reduce lipogenesis and facilitate lipolysis. This may account for the clinically reported reduction in weight and lowering of serum cholesterol levels in the overweight and hypercholesteremic diabetic patient.

usually well tolerated

Mainly gastrointestinal side effects may occur. However, as with many drugs, you should keep in mind that higher dosages may increase the incidence. Hypoglycemic reactions are rare when DBI-TD is used alone.

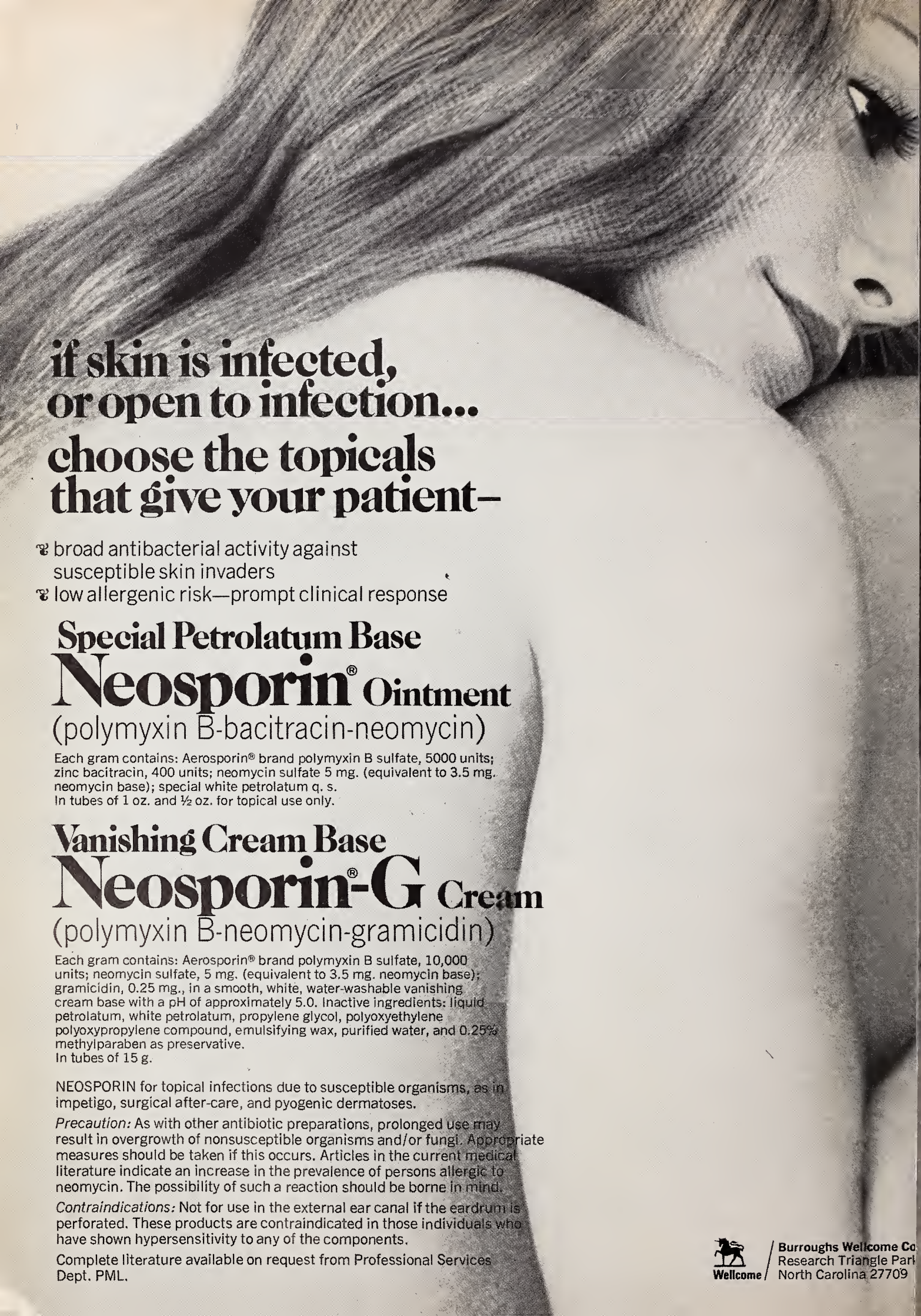
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DBI-TD 50 mg. for the newly diagnosed overweight, stable adult diabetic
DBI-TD 100 mg. for the overweight, adult-onset diabetic who needs higher doses of a reliable oral hypoglycemic

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary. **Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes that is uncomplicated and well regulated on insulin; acute complications of diabetes (metabolic acidosis, coma, infection, gangrene); surgery; severe hepatic disease; renal disease with uremia; cardiovascular collapse, after disease states associated with hypoxemia. **Warning:** Use during pregnancy is to be avoided. Until adequate data on the effects of DBI on the human fetus are available, such use can be considered experimental. **Precautions: Starvation Ketosis,** which must be differentiated from "insulin lack" ketosis, and is characterized by ketonuria in spite of relatively normal blood and urine sugar, may result from excessive DBI therapy, excessive insulin reduction or insufficient carbohydrate intake. Adjustment of DBI-TD or insulin dosage, or supplying carbohydrates, alleviates this state. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING BLOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period, particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 25 mg.-300 mg. daily. **How Supplied:** 50 mg. timed-disintegration capsules, bottles of 100 and 1000; 100 mg. timed-disintegration capsules, bottles of 100 and 500. **Also Available:** DBI tablets 25 mg., bottles of 100 and 1000.

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USV



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- low allergenic risk—prompt clinical response

Special Petrolatum Base
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Each gram contains: Aerosporin® brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

Vanishing Cream Base
Neosporin®-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
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NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

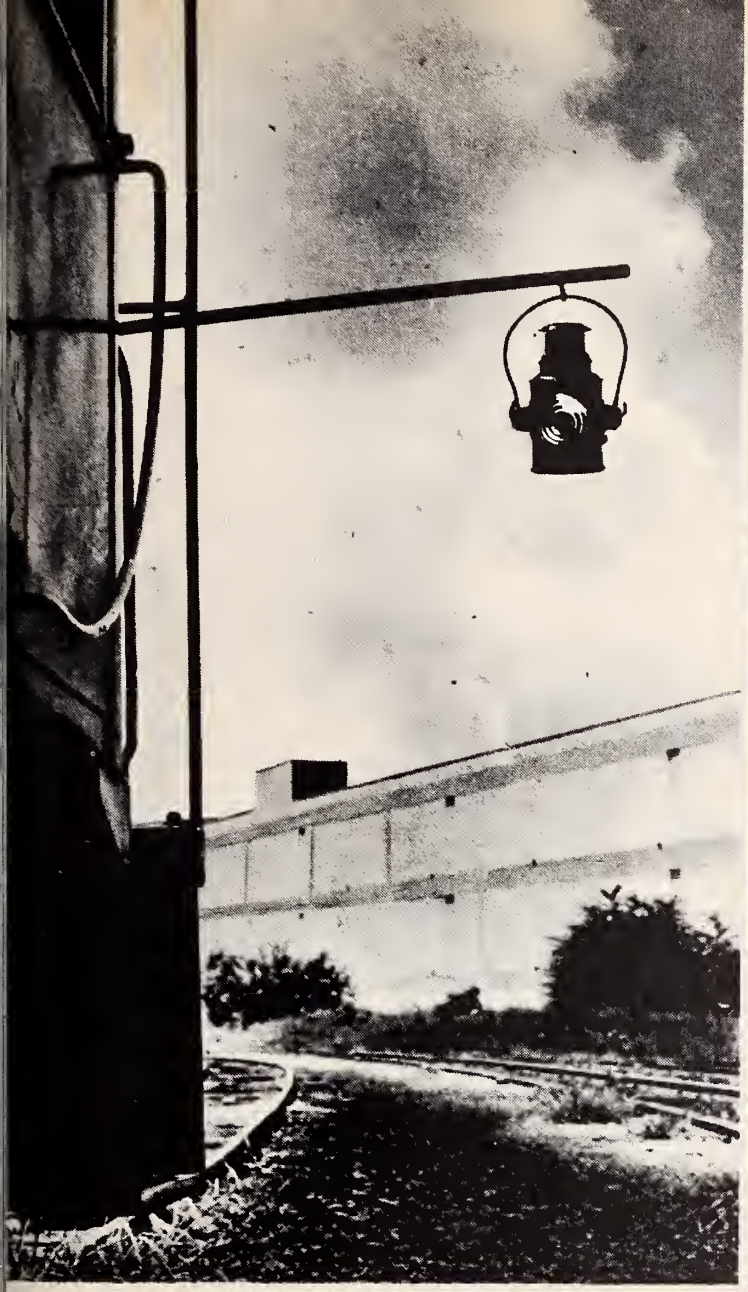
Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

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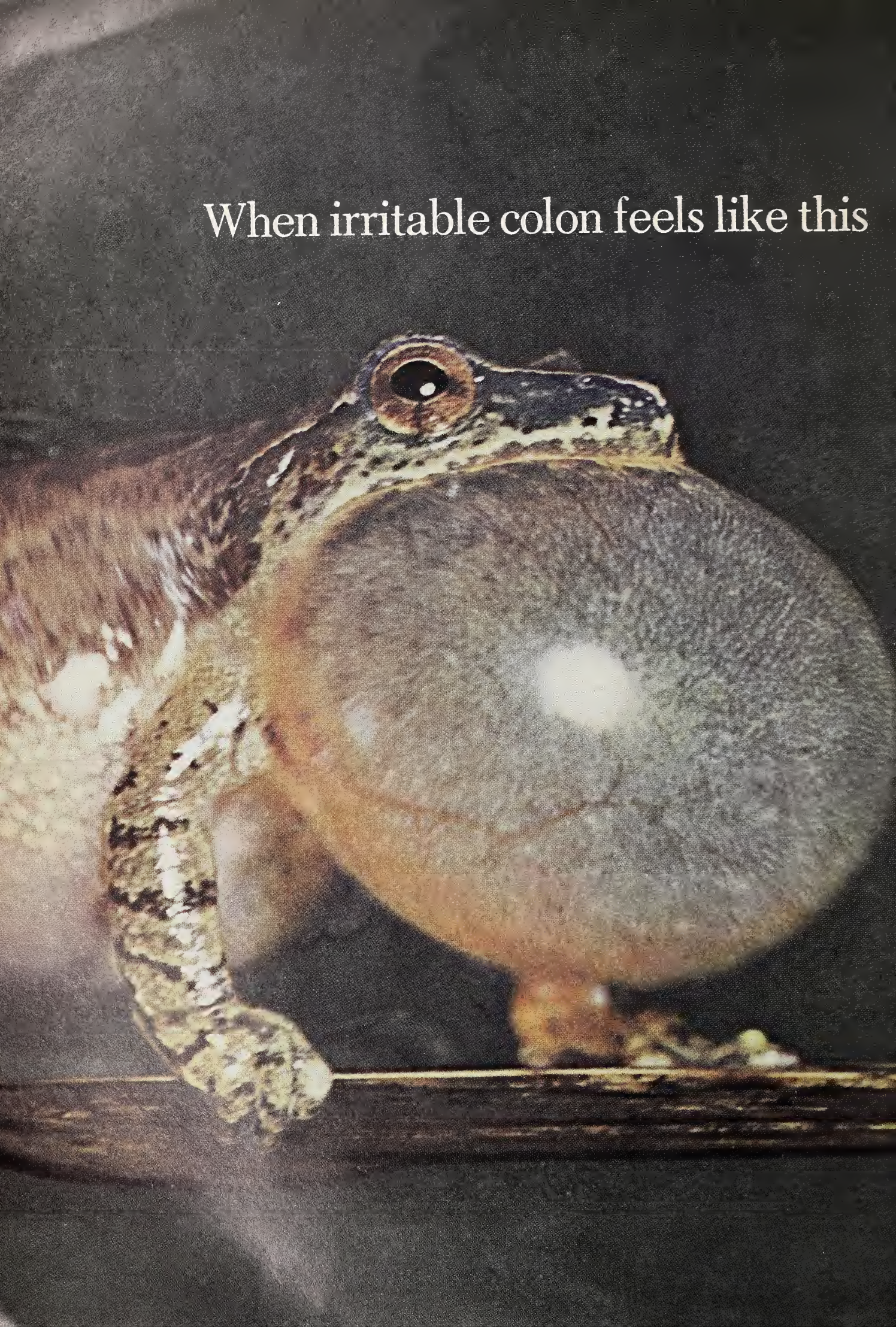
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Contraindications: Sensitivity to either component. ***Warnings:*** *Usage in Pregnancy*—Use in woman of child-bearing potential only when potential benefits outweigh possible risks. ***Precautions:*** Exercise caution in patients with known allergies or history of drug allergies. If a sensitivity reaction or signs or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. ***Adverse Reactions:*** Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely, allergic-type skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions. In rare instances, *Paraflex* (chlorzoxazone) may possibly have been associated with gastrointestinal bleeding. While *Paraflex* (chlorzoxazone) and chlorzoxazone-containing products have been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. ***Usual Adult Dosage:*** Two tablets q.i.d. ***Supplied:*** Scored, light green tablets, imprinted "McNEIL" —bottles of 100.

References: 1. Batterman, R. C., and Grossman, A. J.: Fed. Proc. *14*:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970. 3. Vickers, F. N.: Gastroint. Endosc. *14*:94, 1967. 4. Mielke, C. H., Jr., and Britten, A. F. H.: New Engl. J. Med. *282*:1270, 1970 (Corresp.). 5. Kestler, O. C., and Gyurik, J.: Industr. Med. Surg. *21*:372, 1962. 6. Forster, S., et al.: Amer. J. Orthop. *2*:285, 1960. 7. Data on file, McNeil Laboratories, Inc. 8. Friend, D. G.: Clin. Pharmacol. Ther. *5*:871, 1964.

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Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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(hetacillin)

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IS IT JUST AN AMPICILLIN?

Extensive clinical experience has shown that this ampicillin derivative offers unique advantages over the ampicillin you may be presently prescribing:

1/ A uniform adult and a uniform pediatric dosage in all mild-to-moderate infections due to susceptible organisms—respiratory, genitourinary, G.I., skin and soft tissue.
Adults: 225 mg. q.i.d.
Children: 10 mg./lb./day in 4 equally divided doses.
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2/ A low dosage for mild-to-moderate genitourinary infections due to susceptible organisms.

3/ A low dosage for mild-to-moderate pediatric infections due to susceptible organisms.

4/ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin.

5/ Lower patient cost. Inherent with lower dosages for many indications is the benefit of lower cost to the patient. And, in these many instances, Versapen is significantly more economical to the patient than ampicillin brands.

Side Effects. As with any penicillin serious allergic reactions, including anaphylaxis, can occur. The type of side effects most frequently encountered are the same as with ampicillin, namely: diarrhea, loose stools, rash and nausea.
Please see next page for brief summary of prescribing information.

BRISTOL

Versapen® (hetacillin)
Versapen®-K (potassium hetacillin)

■ Versatile dosage forms...for all patients...of all ages. ■ A uniform adult and a uniform pediatric dosage for all susceptible mild-to-moderate infections...respiratory, genitourinary, G.I., skin and soft tissue. Recommended dosage varies with severity, not site, of infection. ■ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin. ■ Economical therapy.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
(A) 12/28/70
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Actions: Hetacillin provides bactericidal levels of ampicillin but has no antibacterial activity itself. It hydrolyzes to ampicillin and has a half-life of 20 minutes at pH 7.1.

Indications: Hetacillin is indicated in the treatment of susceptible strains of the following organisms in the diseases listed. Bacteriology studies to determine the causative organisms and their sensitivity should be performed. Therapy may be instituted prior to obtaining results of sensitivity testing.

Group A beta-hemolytic Streptococcus: Tonsillitis, pharyngitis, otitis media, skin and soft tissue infections.

Diplococcus pneumoniae: Broncho- and lobar pneumonia, otitis media.

Nonpenicillinase-producing *Staphylococcus aureus:* skin and soft tissue infections, otitis media.

H. influenzae: Bronchitis and bronchopneumonia.

Escherichia coli: Cystitis, pyelonephritis, prostatitis/urethritis, skin and soft tissue infections.

Proteus mirabilis: Cystitis, pyelonephritis, skin and soft tissue infections.

Enterococcus (*Streptococcus faecalis*): Cystitis, pyelonephritis, prostatitis/urethritis.

Shigella species: Shigellosis.

Salmonella species: Salmonellosis (parenteral only).

Indicated surgical procedures should be performed.

Use parenteral drug only in severe infections or in patients unable to take oral medications.

Contraindications: A history of allergic reactions to penicillins or lidocaine.

Warning: Anaphylaxis may occur, particularly after parenteral administration and especially in patients with an allergic diathesis. Check for a history of allergy to penicillins, cephalosporins or other allergens. If an allergic or anaphylactic reaction occurs, discontinue hetacillin and institute appropriate treatment.

Usage in Pregnancy: Safety for use in pregnancy is not established.

Precautions: Mycotic or bacterial superinfections may occur. Assess renal, hepatic and hematopoietic function periodically during long-term therapy. Because intravenous administration of potassium hetacillin in doses in excess of 5 mg./Kg. has been noted to enhance the vasopressor effect of epinephrine in dogs, precautions should be taken with patients receiving epinephrine concurrently.

Adverse Reactions: Untoward reactions include: Glossitis, stomatitis, black "hairy" tongue, nausea, vomiting and diarrhea, skin rashes, urticaria, exfoliative dermatitis, erythema multiforme and anaphylaxis (usually with parenteral administration). Anemia, thrombocytopenia, thrombocytopenic purpura, eosinophilia, leukopenia, and agranulocytosis have been noted, are usually reversible and are believed to be hypersensitivity phenomena.

Elevations in one or more liver function tests have been reported without any evidence of hepatic toxicity.

Local reactions: Thrombophlebitis at the site of intravenous injection has been reported.

Usual Dosage: Patients weighing 90 lbs. or more: 225 mg. q.i.d. Patients weighing less than 90 lbs.: 2.5 mg./lb. q.i.d.

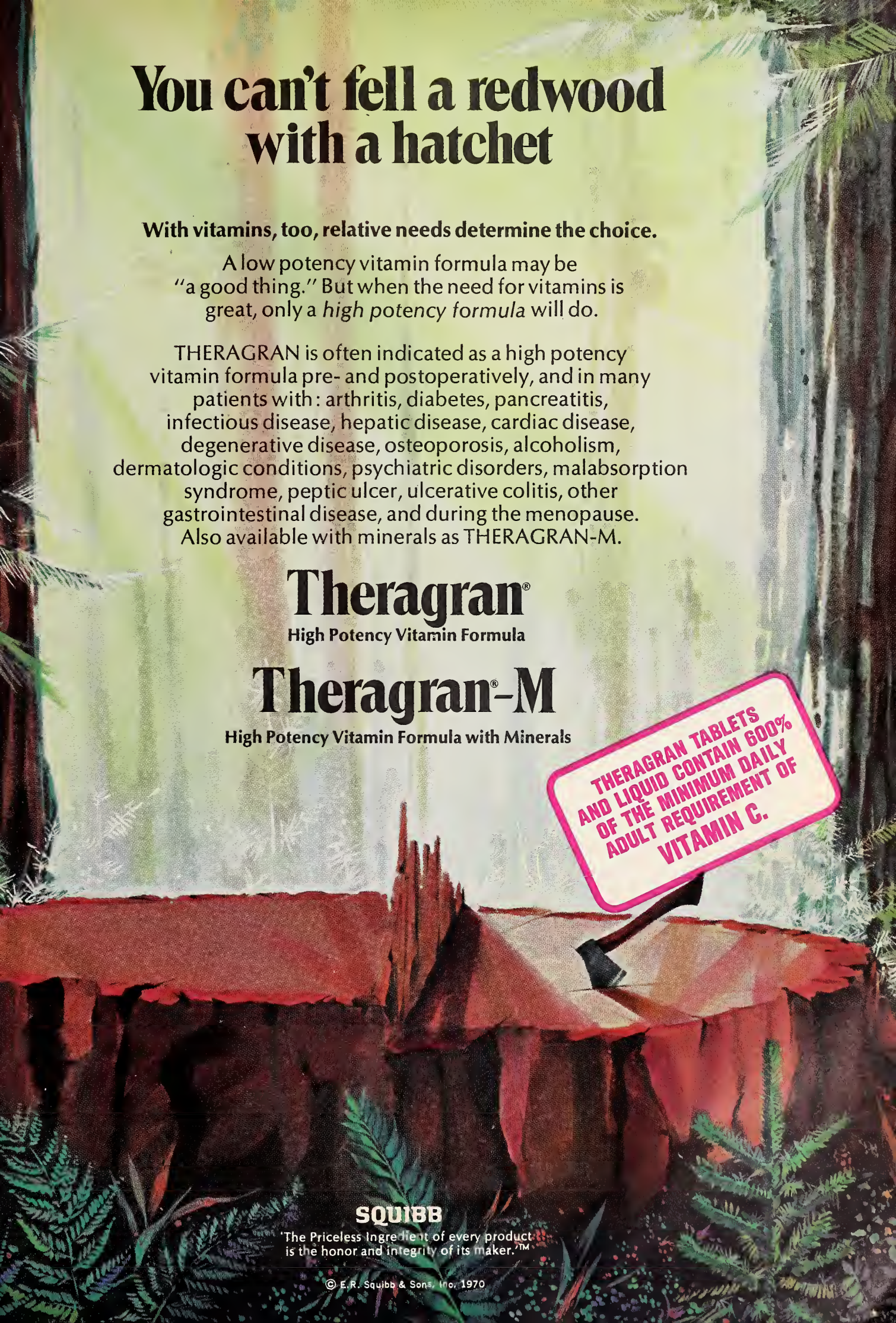
Group A beta-hemolytic streptococcal infections should be treated for at least 10 days. Administer oral preparations in a fasting state to insure maximum absorption.

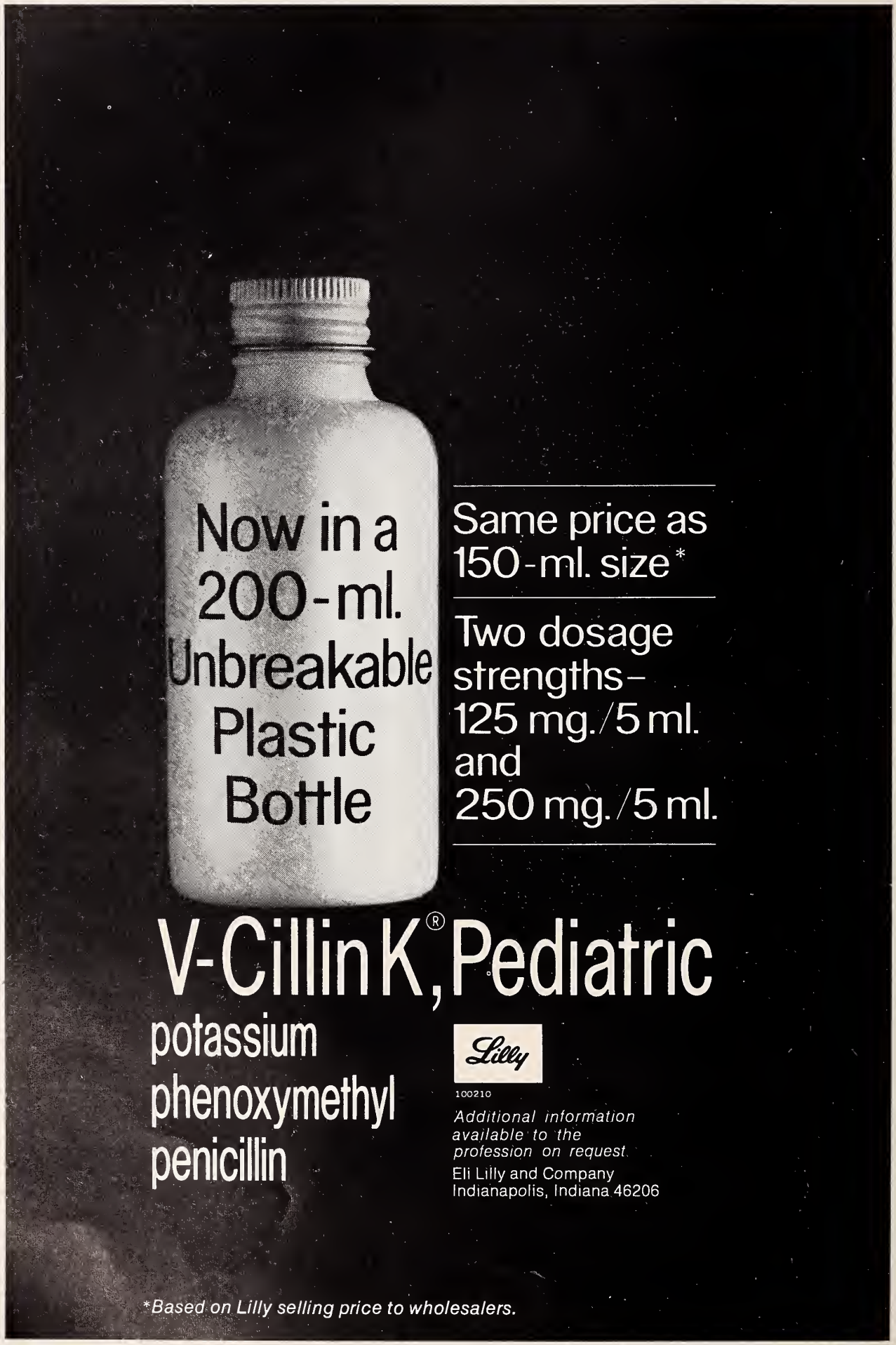
Recommended dosages (expressed in terms of ampicillin activity) in susceptible mild-to-moderate infections*

Versapen® (hetacillin) **112.5 mg.**	Chewable Tablets	*Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: one tablet *q.i.d.*
	Oral Suspension (112.5 mg./5 ml.)	*Usual pediatric dosage:* 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: 1 tsp. *q.i.d.* Available in 40 ml., 80 ml., and new 100 ml. bottles.
	Pediatric Drops (112.5 mg./ml.)	*Usual dosage:* 10 mg./lb./day in 4 equally divided doses. For a 10 lb. child: ¼ dropper *q.i.d.* Available in 10 ml. bottles.
Versapen®-K (potassium hetacillin) **225 mg.**	Capsules	*Usual adult dosage:* one 225 mg. capsule *q.i.d.*
	I.V. I.M. with Lidocaine HCl (20 mg./vial)	*For patients weighing 90 lbs. or more:* 225 mg. *q.i.d.* *For patients weighing less than 90 lbs.:* 10 mg./lb./day in 4 equally divided doses.

*For severe infections—Adults: 450 mg. *q.i.d.* Children up to 90 lbs.: 20 mg./lb./day in 4 equally divided doses. Very serious infections may require very high doses and prolonged therapy. *Note:* Versapen® has been issued Patent No. 3198804

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Original Articles

PROGRESSIVE MULTIFOCAL LEUKOENCEPHALOPATHY: PATHOLOGICAL AND ELECTRON MICROSCOPIC STUDIES

José Kanshepolsky, M.D., John Beggs, M.S.
and John D. Waggener, M.D.

In 1958 Åström, Mancall, and Richardson[1] described three cases of a unique demyelinating process occurring on a background of chronic lymphocytic leukemia and Hodgkin's disease. They named this neuropathological condition progressive multifocal leukoencephalopathy (PMLE) which was characterized by the formation, growth, and coalescence of multiple foci of demyelination in the central nervous system, with relative sparing of axis cylinders. Since then an additional 80 cases from various parts of the world[8] have broadened the concept of this entity. Association of the neurological disorder as a late complication of a pre-existing, generalized, chronic systemic lymphoproliferative disease has been common. Cases of PMLE have also been described in carcinomatosis, tuberculosis, coronary artery disease, chronic asthma, pulmonary anthracosilicosis, systemic lupus erythematosis, liver cirrhosis, diabetes mellitus, and in a few cases portmortem examination showed no underlying pathologic process to which the neurologic disease could in any way be related. Regardless of the specific nature of the associated disease process the neuropathologic alterations have been relatively constant. Strong support for the hypothesis of a viral etiology of PMLE has been the demonstration of virions having the morphology of the papova group in 29 cases studied by electron microscopy. Greater details will be brought out in the discussion of

Dr. Kanshepolsky is Resident in Division of Neurological Surgery. John Beggs is Electron Microscopist, and Dr. Waggener is Chairman of the Division of Neuropathology, Barrow Neurological Institute of St. Joseph's Hospital and Medical Center, Phoenix, Arizona.

this disease, which, due to the awareness of clinicians and pathologists, is being recognized and studied more often. We present here the first case reported in Arizona and the electron microscopic study findings in this condition.

CASE REPORT

In October 1967, C.A., a 29-year-old white female, was admitted to a local hospital because of a tender, enlarged node in the left cervical area, night sweats, fever spikes, and a 20-pound weight loss of five months' duration. Significant physical findings included a 1 x ½ cm tender node in the lower left anterior cervical chain. The liver was palpable 3 cm below the right costal margin. The spleen was not palpable. Laboratory studies showed a hemoglobin of 11.3 mg%, WBC 15,000 with 76 neutrophils and "frequent atypical monocytes." A roentgenogram of the chest was normal. The enlarged node was biopsied; a bone marrow was done, and a pathological diagnosis of Hodgkin's disease was made from both tissue sources. The patient was treated with nitrogen mustard, Prednisone, and cyclophosphamide.

She was readmitted in May 1968 with increasing adenopathy in the neck. Physical examination was unchanged. Laboratory studies revealed a hemoglobin of 12.7 mg%, WBC 23,000 with 92% neutrophils, platelets 639,000. Liver function tests were normal. She was discharged taking Prednisone and cyclophosphamide and received 1600 rads each to cervical, axillary, mediastinal, abdominal, and pelvic areas.

Her third admission in August 1968 was due to pain in the low sacral area. A complete blood count was normal. CSF examination revealed three cells and a protein content of 37 mg%.

In July 1969 she was admitted after an apparent grand mal seizure and recurrent low back pain. The physical examination was normal. WBC was 24,000 with 98% neutrophils, and the platelet count was 800,000. A myelogram and an EEG were normal. Spinal fluid showed no cells and a protein of 19 mg%. Lymphangiograms revealed no significant retroperitoneal disease. She received x-ray therapy to the cervical spine and was discharged on Prednisone.

The patient continued to have low back pain and was readmitted for the fifth time in October 1969. Physical examination was normal except for a puffy face, a tender node at the left angle of the jaw, and purpura of the arms and legs. Laboratory workup included WBC of 11,000, hemoglobin 10 mg%. She was discharged on Prednisone and chlorambucil.

She was admitted for the 6th time in July 1970 for evaluation of two weeks of weakness, shaking and pain in the right arm, pain in the right leg, and some shaking of the left arm. Physical examination revealed weakness distally in the right upper extremity. Sensation was decreased to pinprick in the right hand. The cranial nerves were intact. CSF examination and cervical myelogram were normal. An EMG of the right arm was normal. An EEG showed focal slowing in the left temporal area and irritative activity in both occipital regions. She was then given x-ray therapy to the skull.

In November 1970 she was again seen for persistent tremor in the right arm and headaches. Neurological examination revealed persistent loss of strength of the distal muscles of the right arm. She also had impaired finger-to-nose test on the right, and the tremor was increased with purposeful activity. A brain scan was negative, and the EEG showed some improvement over the study three months earlier. She was admitted to St. Joseph's Hospital for a left brachial angiogram and pneumoencephalogram, both of which demonstrated a mass lesion in the interpeduncular fossa. She received an additional course of x-ray to the base of the brain.

In January 1971 she was much worse and was admitted to St. Joseph's Hospital for the second time with thickness of speech, right hemiparesis, right supranuclear facial paralysis, right Babinski, generalized hyperactive reflexes, ataxia, and increase of the tremor of the right arm. The WBC was 6,700 with 72 segs, 25 bands, 3 lymphs, and 1 mono; hemoglobin was 9.6 mg%, and the platelets were 77,000. Urinalysis was normal except for 4+ protein. The SMA-12 chemical determination was normal. A chest film was within normal limits. A repeat pneumoencephalogram again demonstrated the mass, essentially unchanged. Brain scan was normal. A spinal tap showed no cells and a protein of 75 mg%. After platelet transfusions a right subtemporal craniotomy was performed with evacuation of an interpeduncular fossa arachnoid cyst. She received numerous platelet transfusions postoperatively and maintained a normal platelet count, but progressively deteriorated, developed seizures, hemidecorticate posturing, and died 12 days post craniotomy.

Anatomic Examination

The necropsy was performed eight hours after death. In the general autopsy there was no evidence of active Hodgkin's disease, although mediastinal nodes showed advanced fibrosis. No tissue system other than the CNS presented significent findings. The brain weighed 1260 grams. There was no significant atherosclerosis of the vessels of the base of the brain and no gross evidence of neoplastic involvement.

Coronal sections of the brain revealed slightly mottled appearance of the white matter within the centrum semiovale, more prominent on the right. Irregular areas having a granular appearance were also noted near the cortical surface and in the right midthalamus, right pulvinar, and in the deeper portions of the cortex bilaterally (Fig. 1). The gray-tan mottled lesions had an irregular distribution without a vascular pattern. Sections of the brain stem showed the same type of lesions at the pontine and medullary levels.

Microscopic Techniques

This study was performed in sections fixed in 10% formalin for 2 weeks. The usual techniques with paraffin blocks were employed, including hematoxilin-eosine and Luxol fast blue-PAS stains.

Sections of the above-described lesions were also studied with electron microscopy in blocks embedded in Epon using the method of Luft.[5] Ultrathin sections were cut with diamond knives on a MT-2 Porter-Blum ultramicrotome and were placed on uncoated grids. After staining with uranyl acetate and lead citrate,[7] the sections were examined in a Philips 300 electron microscope.

Description

The lesions exhibited wide variation in size; most were small, measuring 1 to 4 mm. However, confluence of these lesions resulted in areas greater than 1 cm in diameter, consisting of poorly-defined zones of demyelination sometimes extending to the adjacent cortical gray matter. The most prominent cytological feature was enlargement of the oligodendroglial nuclei. Some were hyperchromatic, simulating neoplasia; others contained one or more poorly-defined inclusions of eosinophilic material (Fig. 2). Inflammatory response was virtually absent. Lesions were noted in the cerebrum, brain stem, and cerebellum. The pontine base was markedly involved. There was no evidence of Hodgkin's disease in the brain tissue.

Electron microscopy of the intranuclear inclusions (Figs. 3, 4) revealed viral particles lacking an outer envelope. These circular particles situated within the nuclei of the oligodendroglia were uniform in size, measuring from 42.5 to 45 mμ in diameter, had a moderate, slightly variegated density, and often filled the nucleus and formed pseudocrystalline patterns. Smaller de-



Figure 1.
Coronal section of frontal cerebral hemisphere (formalin fixed) showing the mottled, ill-defined appearance of the subcortical lesions (arrows). Involvement of adjacent gray matter is evident. X2.3.

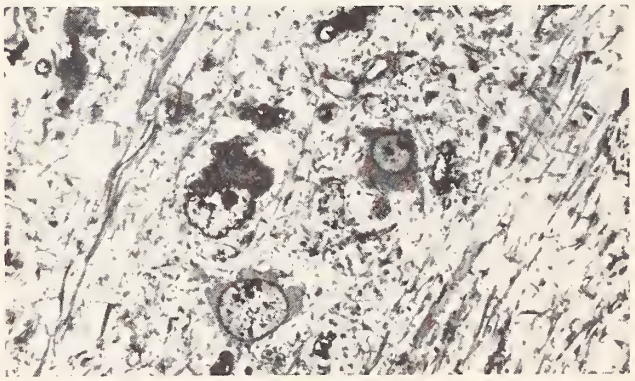


Figure 2.
Light microscopy of a demyelinated area showing enlarged oligodendroglia containing intranuclear inclusions. A 1μ thick section, epon embedded and stained with toluidine blue. X2,000.

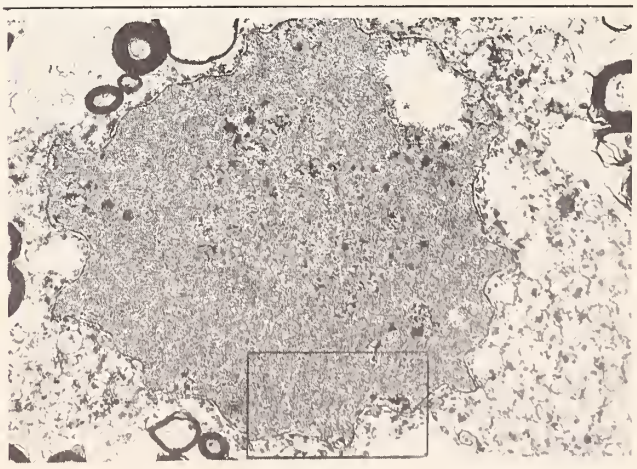


Figure 3.
Electron micrograph of an oligodendroglial nucleus filled with particles. X14,300.

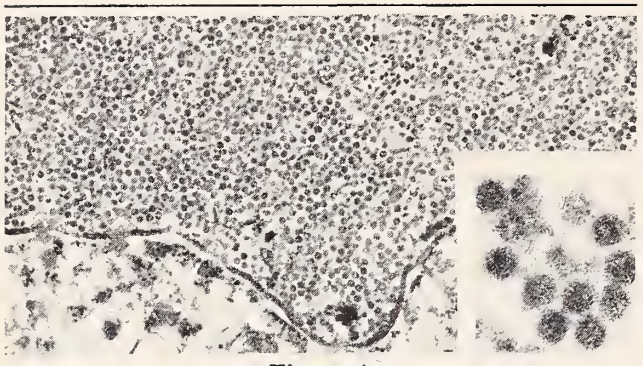


Figure 4.
Higher magnification of rectangular field in figure 3. Viral-like particles are confined to the nucleus (nucleus membrane below). Circular profiles predominate. Lower right inset demonstrates their uniform diameter 4.25 to 45.0 mu. Their size, profile, and lack of an outer membrane are features consistent with icosahedral virions of the papova group. X51,000. Inset X210,000.

posits of particles were also noted in oligodendroglial nuclei not containing inclusions on light microscopy examination.

DISCUSSION

The clinical syndrome of PMLE has not been stereotyped. All the patients have had overt progressive neurological deficits. Dementia, alterations in the state of awareness, language disorders, visual difficulties, and signs of corticospinal tract disease have been found frequently. Impaired sensation, incoordination, dysphagia, and other bulbar signs and movement disorders have also been observed. Seizures have been noted in a few patients. The average age of death is in the mid-fifties, with the youngest known case occurring in a patient age 28 (Voigt, 1966, quoted by ZuRhein 1969),[12] and the oldest was 84.[2] The sex incidence has been a predominance of males with a ratio of 5 to 3.[9]

Progressive multifocal leukoencephalopathy has occurred in most cases as a terminal event in association with a pre-existing disease. The course of the disease is quite rapid with progressive deterioration up to the time of death. The average interval between the first neurological symptoms and death is usually two to four months, but there have been a few cases reported with an extremely brief neurological illness, starting as late as five days prior to death.[6] A case of an unusually long duration has been described in which a patient with lymphosarcoma had minimal right hemiparesis five years before deterioration and the development of other neurological impairments.[3]

Routine diagnostic methods have been unrevealing except for nonspecific abnormalities found in the EEG. The cerebrospinal fluid is essentially normal with an occasional slight elevation of the protein content. Radiographic contrast studies as well as brain scan have been noncontributory in establishing the diagnosis. The only presently available method of making the diagnosis is by pathological examination. Viral cultures of antemortem cerebral biopsy tissues have been unrewarding.

The morphological patterns of the lesions are very characteristic. These present as multiple foci of demyelination of varying sizes and different stages of evolution. The foci have a tendency to become confluent by peripheral expansion, thus varying in size from microscopic to large patches occupying most of the centrum semiovale. These areas of demyelination may be round, oval, or irregular, and can be present in the cerebral hemispheres, basal ganglia, brain stem, cerebellum, and spinal cord.

Light microscopy reveals loss of myelin sheets with relative sparing of axons. The phagocytosed products of myelin breakdown can be detected by applying appropriate staining techniques. No relationship with respect to the blood vessels is observed. At the periphery of the lesions, and surrounding the foci of demyelination, oligodendrocytes are distorted and contain enlarged nuclei. The latter often contain irregular basophilic as well as eosinophilic deposits. The presence of reactive astrocytes, including multinucleated porms simulate neoplasia. The lack of inflammatory response in the presence of active demyelination is one of the characteristic findings and accounts for the frequently observed absence of CSF cells elevations.

In 1965 ZuRhein and Chou[11] examined a case of PMLE at the ulstrastructural level and found particles within oligodendroglial nuclei consistent morphologically with the papova group of viruses (small DNA viruses, measuring from 40 to 55 mμ, including the human wart virus, the simian vacuolating agents, and the polyoma virus of mice). Subsequent studies have shown this type of virus-like particle to be present in all cases studied under EM, but attempts to culture a viral agent have been unsuccessful. The question has arisen whether these virus-like particles might represent the reactivation or dissemination of a latent agent in patients with some form of immunologic defect or impaired immunologic response. Immunosuppressive effects of the therapeutic agents, often used, cannot be blamed entirely as an adequate explanation, since many

patients (12 of 83) received neither irradiation, corticosteroids, nor antineoplastic drugs. No therapeutic agents have modified the course of PMLE even when the underlying pre-existing disease had been controlled (as in our case).

In recent years there has been great interest and considerable investigation of the so-called CHINA viruses (chronic infectious neuropathic agents). Such infections are characterized by a prolonged latency period following progressive clinical disease resulting in death. The findings are limited to one host and one organ or tissue system. Apart from PMLE included as possible slow viral infections are the human rubella, cytomegalovirus, subacute sclerosing panencephalitis, kuru, and Jakob-Creutzfeldt disease and the veterinarian entities of visna and scrapie.[4, 9, 10]

SUMMARY

The current concepts and neuropathologic studies with light and electron microscopy of progressive multifocal leukoencephalopathy (PMLE) are reviewed. An additional case of PMLE occurring in a 29-year-old female with Hodgkin's disease is described. The ultrastructural observations support the hypothesis of a viral infection of the nervous system in the presence of pre-existing disease.

ACKNOWLEDGEMENT

The authors are indebted to Dr. William B. Helme for the opportunity to study his patient, to Mrs. Karen Johnson, histology technician, and Mrs. Barbara Rhodes, electron microscopy technician, for technical assistance, and to Mrs. Nora Kriehn for transcription of the manuscript.

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COLON DUPLEX, A CORRECTABLE CAUSE OF CONSTIPATION

Stanford M. Goldman, M.D.

Robert C. Kreuzburg, M.D.

Complete duplication of the large bowel (colon duplex) is a rare condition, difficult of diagnosis, and therefore, when encountered may be overlooked. The author presents an interesting case illustrating these points and stressing those factors which should create a high degree of suspicion in the mind of the examiner. The most important of these is the constellation of congenital anomalies which usually coexist with the colon duplex.

CASE REPORT

A six-year-old Indian boy (half Choctaw) was admitted to the Phoenix Indian Medical Center (PIMC) on November 1, 1969 for the fifth time for re-evaluation of persistent constipation, abdominal distention, encropresis, and enuresis. During four previous admissions for similar complaints, the clinical impression was that his symptoms were on a neurological basis.

At birth, multiple congenital anomalies of the genito-urinary system (exstrophy of the bladder, bifid bladder and scrotum, and atrophic left kidney), of the skeletal system (diastasis of the symphysis pubis, hemivertebrae, spina bifida, a partial sacrum duplex, and calcaneal valgus deformity), and of the musculocutaneous system (congenital flexion contractures extending from the left hip to the Achilles tendon, a communicat-

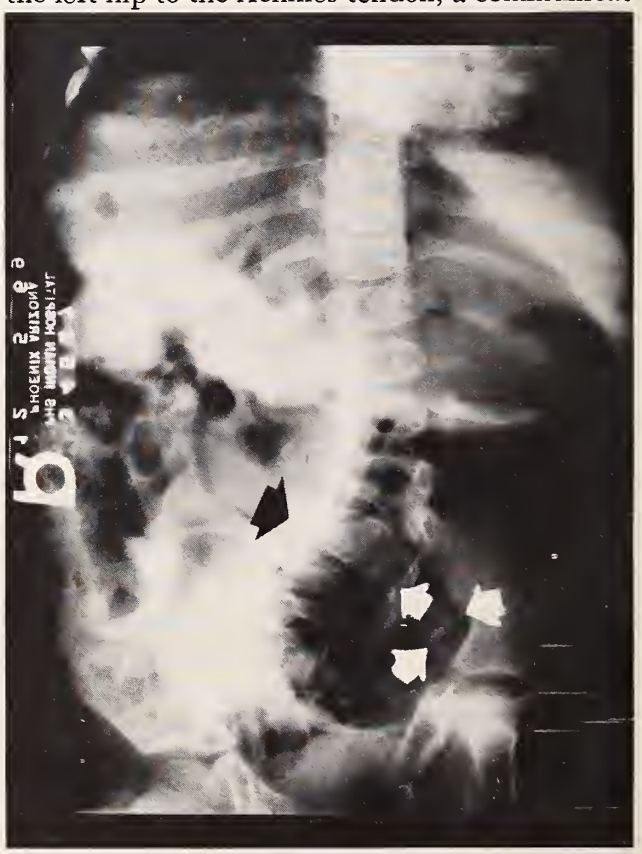


Figure 1.
Plain films of the abdomen in 1969 reveal the diastasis of the symphysis pubis, the spina bifida, the hemivertebrae, and the partial sacrum duplex (arrows). The "distended loop of colon" reported by previous radiologists represents the duplicated large bowel. The liver has been pushed by the dilated bowel towards the left side.

From the Departments of Radiology and Pediatrics, U.S.P.H.S. Phoenix Indian Medical Center, Phoenix, Arizona 85016. Presented at the Sixth Joint Meeting of the Clinical Society and Commissioned Officers Association of the U.S. Public Health Service Galveston, Texas, April 4-7, 1971. Dr. Goldman's present address: Einstein College of Medicine, Bronx, New York 10461.

ing right inguinal hydrocele, and hypoplastic abdominal musculature) were recognized.

During the first year of life, the child underwent several surgical procedures, including excision of the ectopic bladder and scrotum and repositioning of the testes into the single normally placed scrotum. In spite of the peritoneum having been opened, the surgeons "could find no abnormal intra-abdominal structures, with the exception of the hypoplastic left kidney.[1]

The child was evaluated during the subsequent years, both on an in-patient and an out-patient basis for chronic constipation, increasing abdominal girth, encopresis, and enuresis. Physical examination revealed a single anus. At sigmoidoscopy, one rectum, without evidence of a fistula or septum, was noted. His abdominal films consistently showed a large distended loop which was filled with air and fecal material (Fig. 1). An upper gastrointestinal examination performed at two years of age was interpreted as showing a dilated colon displacing the small bowel to the right. A barium enema (Fig. 2) performed on the same admission, was interpreted as showing a dilated, malrotated colon assumed to be on a neurological basis in view of the vertebral



Figure 2.
A barium enema performed in 1965 revealed a malrotation of the colon. The gas shadow which represents the duplicated bowel, was ascribed to incomplete filling of the colon.

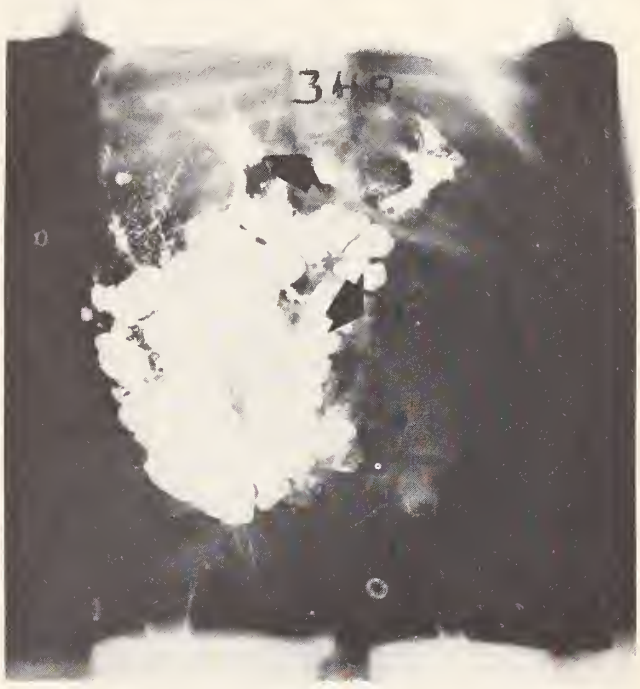


Figure 3a
A 3-hour film from the U.G.I. Series in 1969 demonstrates filling of the stomach, small bowel and the normal-sized functioning large bowel. Note the distended air filled duplication (arrows).



Figure 3b
A film from the Barium Enema in 1969 showing the duplication to be on the anti-mesenteric border of the border of the filled colon (arrows). A retrograde small bowel study also failed to fill the duplication.

anomalies. The loop of bowel which did not fill was felt to represent incomplete filling of redundant dilated large bowel. No evidence of Hirshsprung's disease was present. At five years of age another barium enema was performed by a different radiologist who concurred with the initial radiological interpretation.

The child was admitted for the fifth time (November 1969) for a complete re-evaluation of his status because of increasing abdominal distention and failure of his constipation to respond to medical management. Repeat barium enema and upper gastrointestinal examinations (Fig. 3) revealed that there was a large distended loop of bowel which failed to fill on these studies or any of the previous ones. The loop, which had the appearance of dilated colon, surrounded the normal-sized, functioning, barium-filled large bowel. The latter was anatomically complete being connected proximally to the terminal ileum and ending distally in a single rectum. Its cecum was extremely mobile. Therefore, a malrotation was felt to be present.[3] In view of the known association of certain types of congenital anomalies with colon duplex, it was apparent that the non-filled loop represented a duplication of the large bowel and the patient was referred for surgery.

At surgery, a complete duplication of the large bowel was found which ended blindly at the level of the cecum (Fig. 4). Its only connection to the normally functioning colon demonstrated on barium enema was via a fistula between two partially fused appendices. It is assumed that the duplication filled with feces and air through this fistula. The duplication was removed along with a Meckel's diverticulum and small urachal cyst.

The child is presently one and one-half years postsurgery. His abdominal distention, presumably due to dilatation of the duplication with air and feces, has been alleviated. On dietary management alone, he has become continent of feces for the first time. His enuresis has been controlled by a penile clamp.

DISCUSSION

Complete duplication of the large bowel is a surgically-correctable lesion which can be diagnosed preoperatively if the proper index of suspicion exists. Forty previous cases have been reported.[2]

In its most common form, a double or septated rectum is present. The diagnosis is obvious clinically if two anuses are present on physical examination or the septated rectum is visualized at sigmoidoscopy. A barium enema may be performed to demonstrate whether the duplication is complete or incomplete.

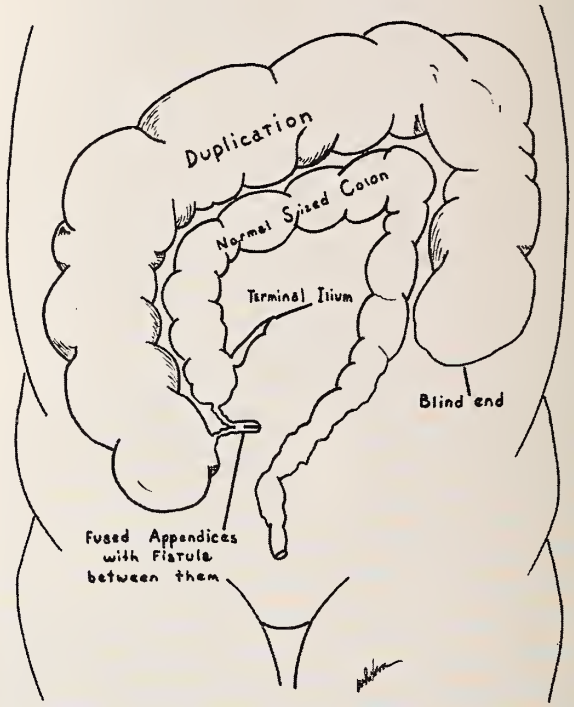


Figure 4
Diagram of the duplication demonstrating its blind end at the level of the sigmoid and the fistula between the fused appendices.

In a patient with a single rectum, the diagnosis of colon duplex can be suspected only by an awareness of a constellation of congenital anomalies commonly associated with it. This anomaly, unlike other forms of enteric duplications or cysts, is probably a type of incomplete hindgut twinning.[4] Therefore, the presence of two vaginas, two urethras, two scrotums, two bladders and a partial or complete duplication of the vertebral column should lead to the suspicion that a colon duplex may exist. Other reported anomalies include exstrophy of the bladder, one non-functioning kidney and spina bifida.[5]

In the radiological evaluation of the patient with constipation, the differentiation between Hirshsprung's disease and constipation on a

functional or neurological basis is made by filling the lower segment of the large bowel only. The aganglionic segment is readily identifiable and no further filling of colon is usually advocated. Thus, Singleton states that "one should not attempt to fill the colon completely, but simply enough to establish the diagnosis."[3] Similarly, Caffey says that there is "no diagnostic advantage in complete loading of the dilated colon with several quarts of a barium-water mixture."[6]

This unusual case is reported to stress the necessity of the complete filling of the entire bowel during barium enema in children when certain congenital anomalies are present, once Hirshsprung's disease has been excluded. Failure to do so leads to the incorrect diagnoses of constipation on a neurological or psychological basis. If the colon is completely filled during barium enema, the duplication may fill via a fistula at the level of the cecum or terminal ileum. On the rare occasion that the duplication fails to fill with barium, it should be obvious that there is a non-opacified loop of bowel; which, in the presence of certain congenital anomalies, should lead to the diagnosis of colon duplex.

SUMMARY

A case report of a 6-year-old Indian boy with colon duplex is presented. The difficulties in diagnosing this rare, correctable entity are illustrated. The presence of a duplication of the genitourinary or skeletal system should alert the clinician as to the possible presence of colon duplex. The importance of complete filling of the entire large bowel in these patients when chronic constipation is present, is stressed.

ACKNOWLEDGEMENTS

We are indebted to the following individuals: Dr. Samuel L. Cohen and Dr. David Trump for their assistance and consultation, Mrs. Alice Boring for her aid in the preparation of the manuscript, and Miss Patricia Whitson for preparation of Figure 4.

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HEALING 'ROUND THE WORLD

William A. McGarey, M.D.

EDITORIAL NOTE: *This article contains many speculations and unsupported assertions. It represents the opinions of the author and is not acceptable to psychiatric consultants. Your Editor suggests letters and comments.*

The world today is witnessing a remarkable revolution in consciousness which, in the process, is creating a great deal of turmoil in the fields of education, politics and the church. This change is not, however, limited to these fields but is undoubtedly a part of every profession and activity which involves the effort and creative nature of man himself.

Thus it would not be strange to find the beginnings of such activity in the field of medicine. In fact, we must expect unusual happenings to become more and more frequent as they affect medicine and its future.

Throughout the history of man and his illness, from earliest times, sudden, unexplained healings have brought physicians a degree of consternation, failing to measure up to current understandings of the body and its function and how it should be healed. It is from the area of the psychic, the mystical, the religious that most of these healings have come. Today — perhaps even more frequently — we see "spontaneous remissions" of nearly every kind of illness. It appears, as a matter of fact, that the practice of medicine and those disciplines dealing with the spiritual nature of man are growing closer and closer together and merging intimately at the edges.

My first encounter with the overlapping influence of the mystical on the practice of medicine occurred in 1955. It was then that I read about Edgar Cayce and his ability to prescribe for various illnesses in individuals who were not even present in the room with him, while he lay on a couch in a self-imposed sleep-trance state. Cayce died in 1945, but this story of his life was for me the beginning of a revolution in my healing consciousness, perhaps implying there was more to come.

Early in 1963, about the time I was searching out the mysteries of Egypt and the Holy Land with a group of other people interested in Cayce and his information, Miguel Schulz Contreras, pathologist with the Huipulco Sanitorium in Mexico, with a group of other Mexican physicians visited hospitals in Peking and other parts of China. He described how medical schools in

Peking alone graduated some four thousand students in fourteen years, instructing them in Western-type medicine, but including in their last two years of academic instruction an education in the traditional aspects of Chinese medicine, herbal therapy and acupuncture.[1] They were quite satisfied with the results they obtained from acupuncture and as a present gave Dr. Schulz a case of special needles that are used. These included needles from one to ten centimeters in length, made of fine steel and wound at the hilt with gold wire. The needles are to be inserted in the patient's body at locations predetermined for each ailment by acupuncture charts devised centuries ago. The frequency of puncturing, however, is a clinical decision made by the individual physician. Dr. Schulz reported that the Chinese based their acupuncture on the theory that there is an invisible system of communication which exists between the various organs of the body and the sites at which acupuncture charts direct where the needle should be inserted. This is a system distinct from circulatory, neurologic and endocrinologic systems and is unknown to Western medicine.

Schulz described eleven cases of acute appendicitis which had been treated in a Peking hospital recently with acupuncture only, all resulting in alleviation of all symptoms and a quick decrease in the leukocytosis and neutrophilia which had existed prior to the treatment. He observed acupuncture being used on patients with hepatic abscess, peptic ulcer, and acute appendicitis.

One wonders if there is any relationship between this use of steel and gold in a particular manner, and some interesting research reported by P. Baranger and M. K. Filer[2] about ten years earlier. This project was conceived of because the authors noted that among the natives of Africa, Asia and Oceana, there was a widespread custom of wearing collars or rings around the ankles or wrists, or earrings, to guard against illness of various types. These rings are usually made of gold, silver, copper or iron, sometimes of several of the metals and sometimes of plant fibers.

Rather than attributing this custom to superstition, an experiment was devised in which six-day-old chicks were given intravenous injections of forty million malarial parasites — plasmodium gallinaceum.

More than 350 birds were used, classical infection with sporozoites was also a part of the experiment and controls were adequately observed. Collars were put around all the birds except for the controls, and the metal was one millimeter in diameter and either open, closed, or spiral in shape, usually 20 millimeters across.

Average life survival of the birds was only 11.6 days for the controls, but 20 to 30 days for the birds wearing collars of gold, copper and iron. This was with the sporozoite group. Where the parasites were injected directly into the bloodstream, all the metal collars had an effect on the red blood corpuscles by decreasing the influence of the parasites and increasing the average length of survival of the chicks. This was particularly marked in the case of gold, silver, copper, and iron. Survival time for birds wearing the gold collar was longer than for the birds who were given quinine as a prevntive to infection. Even those birds wearing such items as cotton, wool, or nylon collars experienced better survival time than the controls. The control birds lived 13.5 days in this group as against 16 days for the quinine group and 20 days for those wearing the gold collars.

These are but two instances of effects brought about apparently by the vibration of substances on living bodies. Those familiar with this particular field could undoubtedly supply information and stories even more strange and less understandable than these.

Quite recently my wife and I returned from a world study tour designed within the framework of the organization set up by those interested in the work of the late Edgar Cayce, one of the world's best known psychics. As Director of the Medical Research Division of the Edgar Cayce Foundation my objective was not only to see and talk to various psychics along the way but also to study healing practices to some extent throughout the world. My wife, also a physician, (and likewise deeply involved in the study of the legacy Cayce left to those interested in healing) was born in India and thus acted frequently as an interpreter.

There are many avenues of research available in parapsychology as a field, but our interest has been not so much in studying the psychic himself as in researching the information left by a psychic. Thus our trip through England, Holland, Israel, India, Cambodia, Thailand, Australia, and the Fiji Islands afforded us an oppor-

tunity to compare healing practices in these lands – the thoughts and ideas of those that heal – with the concepts we have been studying in the readings that make up Cayce's life work – some 15,000 individual records.

Cayce died about twenty-five years ago, but he suggested in one of his readings that there is a relationship between all healing as it might be found today throughout the world:

> . . . healing that is sincere, of whatever nature — whether spiritual, magnetic, mechanical, allopathic, electrical, thermal — to be of real aid to the body must bear the imprint of the Universal or Divine. No matter in what sphere or on what plane a soul may find itself, this law is ever the same. Construction and constructive influences can only emanate from good. Good can only emanate from God. Hence what may be healing of every nature, any nature, can only come from One Source. (366-1)[3]

In England we spent considerable time with Ronald Beesley and Ursula Roberts, both of whom claimed they could see an aura of light surrounding the human body of varying colors, and having significance as far as the health and experiences of the individual are concerned. They described the aura as vibratory rays of light that are part of each individual who lives. Looking at members of our party sitting by themselves on a chair, each of these gifted individuals "saw" things about their subjects — their health, their abilities, their work, their associates — while they drew pictures of the auras on a blackboard. These psychics saw the aura clearly when they concentrated on it. Perhaps they also saw it as a part of each person, much as we see a coat or a hat.

Cayce in his conscious state saw these colors in connection with people throughout his whole life, with blues, greens and reds pouring down gently from their heads and shoulders. He said:

> An aura is an effect, not a cause. Every atom, every molecule, every group of atoms and molecules, however simple or complex, however large or small, tells the story of itself, its pattern, its purpose, through the vibrations which emanate from it. Colors are the perceptions of these vibrations by the human eye. As the souls of individuals travel through the realms of being, they shift and change their patterns as they use or abuse the opportunities presented to them. Thus at any time, in any world, a soul will give off through vibrations the story itself and the condition in which is now exists. If another consciousness can apprehend those vibrations and understand them, it will know the state of its fellow being, the plight he is in, or the progress he has made.[4]

Harry Edwards, a psychic healer, spoke to us about some of the concepts derived from his thirty years of experience in the field of healing. He tells the story of a lady with a large goitre approaching him and one of his colleagues at the close of a church service and asking them to put their hands on her neck and bring about a healing. Within five minutes, according to the records, the goitre had melted down and her thyroid gland was normal in size. A rather amazing story, but not at all unusual in the history of spiritual healing. Those familiar with Kathryn Kuhlman of Pittsburgh, Pennsylvania, tell of many similar experiences.

This story became more real to us in Utrecht, Holland, as we watched Gerard Croisset, one of the best known of the world's psychics, treat a hemiplegic patient in his living room. This man had suffered a stroke and could not move his left arm or leg, having been brought to Croisset's home in a wheel chair. Croisset states that he prefers treating people with neurological problems, and apparently does not lack for those seeking assistance. Most of these problems require many "treatments" to bring about permanent restoration of function. In his treatment. he holds his hands approximately six inches, cupped, on either side of the extremity he is treating. After he "warms up a bit," the paralyzed leg begins jerking rather uncontrollably while the patient's normal side remains quiet. The question of vibration again becomes apparent as one seeks for some sort of answer as to how such a thing might occur. That it does occur has been observed and reported and substantiated so often that the question — that question — no longer can be reasonably posed.

Croisset is known more for his ability to find lost persons or to assist police departments in the solving of a crime than he is known for his healing. His work has been reported on rather



Gerard Croisset, Sr., Dutch psychic.



Native Indian snake charmer with cobra.

extensively by Dr. H. C. Tenhoeff, Professor of the Parapsychological Institute in the University of Utrecht. We visited with Dr. Tenhoeff at the university, and he gave a lecture to our group dealing with some of the research that has been part of his experience over the years with Croisset and with others. One of Croisset's most recent experiments in conjunction with Dr. Tenhoeff is to describe in Holland the person who will be sitting in a seat in a Denver, Colorado theatre several months later. Adequate precautions are taken that no one concerned with the experiment knows which seat until after the theatre is filled. Then Croisset's description of the individual and that person's interests, physical characteristics, et cetera, are compared with the actual person who occupies the seat. This chair experiment has been done numerous times and poses some rather fascinating implications relative to time, precognition, and what Presbyterians call predestination.

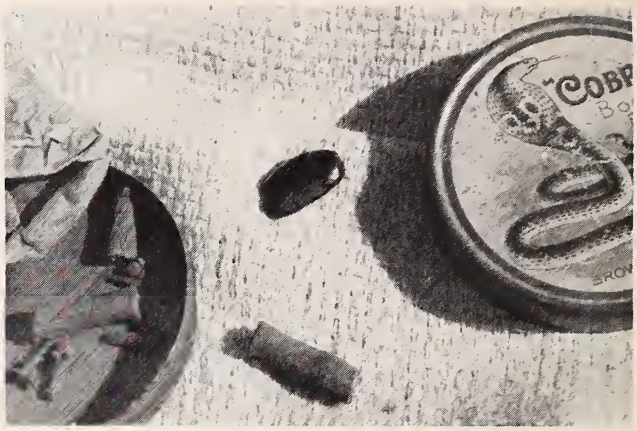


Dr. H. C. Tenhoeff, Professor of the Parapsychological Institute in the University of Utrecht.

In India, one of the first fascinating encounters we experienced was that of watching a snake charmer with his cobra. This particular cobra had his venom sac removed and thus was not dangerous to the snake charmer himself. It was fascinating, however, to watch the snake weave back and forth as the little brown man sat on his haunches and played tunes on his bean gourd flute. It reminded me of the story my father-in-law, Dr. John Taylor, tells of his experience with a snake charmer in India some years ago.[5] He has been a medical missionary in India for some fifty-five years and as a physician believed with reticence many of the stories that he heard from these men with their magic flutes.

While out in the jungle one day he had run

across several snake charmers who were hunting for new cobras to add to their act. They claimed that they gathered in a large circle, sat on the ground, and took turns playing on their gourd flutes. Soon a cobra would come gliding out of the jungle and silently approach the one playing the flute. There the cobra would stop, rear up in front of the man and weave back and forth until hypnotized. Then the man would throw a blanket over him and wrap him up and put him in his wicker basket. Dr. Taylor stayed around for a while but since they were unsuccessful he went on into the village and forgot about it. The next morning when he went out into the mission compound he saw one of the men who had been hunting the cobras the day before. The man told him that he would like to show him the new cobra he had captured. Dr. Taylor was agreeable and my wife, as a little girl, was there for the whole show. The snake charmer set his little wicker basket down, got his flute, and after moving everyone back twenty to thirty feet uncovered the basket. The cobra slipped out and headed like a streak for the hole in the ground across the patio. The snake charmer at once started playing his flute. The snake stopped as if pulled by a wire and turned, gliding slowly back in front of the man sitting on his haunches. After a bit, the snake charmer stopped playing and reached out for the blanket. The cobra came out of his trance and suddenly struck at the man's knee. A flip of the finger caught the snake under the head and sent it sprawling. Immediately he started playing again and up came the cobra, swaying back and forth. This happened several times; then the fourth time, the cobra was too quick for his trainer, and he sunk his fangs in the man's finger instead. As soon as this happened, the snake charmer threw a blanket over the snake, wrapped it up and tucked it back into the wicker basket. Then he opened a small tin box. The cobra venom had already started its effects on him. He began sweating, and his hands started shaking. He took out a piece of herbal root that had obviously been in there for years and rubbed it around the wrist of the affected hand several times. Then he took out a little kidney bean-sized black object which looked like a stone and held it against the finger where he had been bitten. By this time, he was pale and shaking, and Dr. Taylor said he looked as if he were in the early stages of shock. He had to hold the little stone



Carbonized brain of a tree frog and a portion of unidentified root used as cobra bite remedy.



Enlarged portion of frog brain.

on while steadying his hands between his knees.

Dr. Taylor thought at first this was a show, but not now, with the shocky symptoms. Gradually, however, the shaking stopped and the man held his hand out easily with the stone now sticking to the snake bite area. The stone fell off in a few minutes and the snake charmer took it, tapped it against the bean gour until several drops of thick viscid fluid stained the gourd where it touched. This apparently was the poison that had been injected into his finger.

Dr. Taylor eventually bought the little black object, and we still have it at home. It has been analyzed as being pure carbon. It was made of the whole brain of a certain type of tree frog in India, treated with herbs, dehydration and slow heating to the state of pure carbon. Dr. Taylor would still have not believed the story had not the snake charmer gotten out the cobra, handling it more carefully this time, and expressed venom from its fangs by massaging its sacs.

What the Indians obviously believe is that the neurotoxin in the cobra venom has a strong affinity for nerve tissues, and that when the carbonized brain tissue of the frog is put in

close approximation to the cobra venom which by then had gone into the flesh, it had a stronger attraction for the venom than did the nerve tissue within the body of the man who was bitten. Thus it was drawn out and no longer became toxic to the individual who had received the bite. The root, rubbed around one wrist, was to halt the movement of the venom. Their theory, apparently, is that tissues in and of themselves — cells of the body and products of the cells — may have awareness, may attract each other to the extent that they move and have an actual physical attraction. After thirty cobra bites, the snake charmer retires from his profession, probably a very wise decision. They claim they are unable to take any more venom without serious effect.

Visiting the villages of India, we found the most common practitioner of healing to be the Ayurvedic physician. His therapies are remedies from nature, herbs, grasses, shells, stones, and such which he utilizes in healing the body. He believes man to be composed of five basic elements: earth, water, fire, air, and ether, and these are subdivided into five subtle and five material forms each. Good health to him consists of a proper equilibrium between these elements. He obviously believes in the vibratory nature of these substances as they play a part in the healing of the body. Sturges, after five years of practice in close conjunction with Ayurvedic physicians, recounts nostalgically the story of the woman who left the hospital which he directed to almost certain death with a severe case of gas gangrene and recovered with the assistance of an Ayurvedic preparation mixed with ghee — a buffalo clarified butter.[6] This experience reminds him that we in Western medicine in reality don't have the sole knowledge of how to cure.

Santha Rama Rau recounts a story of her experience with the Ayurvedic teachings.[7] She tells of the extensive massages using special oils that were compounded for her special use; of the therapy which took the better part of two hours; and of the need of meditation afterwards as she relaxed from the effects of the treatment. She tells of the special attention given the area between the shoulders and at the base of the neck, where the tensions of the day had caused her to be experiencing symptoms, and she tells of the Ayurvedic physician who recounts to her the history of the science of Ayurveda. It is the science relating to life and longevity, as its Sanskrit name implies, in both the physical and the spiritual sense of the word, the doctor recounted. Many centuries ago, it was conceived through meditation and long experience of introspection. These Vaidyas regard it as the most meritorious among all the sciences, since it teaches man what is good in this life and in the next. The ancient seers, seeking the reality behind all things in this world, handed down the teaching to the present practitioners, and thus those who are today practicing Ayurvedic medicine must relate it to its revered origin. Those aspiring to this profession must study the sacred Sanskrit writings of Ayurveda for five years before they are allowed even to enter their beginnings in this science.

The aim of the Ayurvedic physician is to treat the whole human being, not merely the manifestation of distress in the body as a disease. He — the physician — feels that there is, in every human being, a particular and correct alignment of all his physical, mental and emotional faculties. When these are all in tune, that individual is in the proper condition to receive not only perfect physical health, but the ultimate of the Hindu philosophy, spiritual enlightenment.



The Dalai Lama of Tibet.

Our visits with the Vaidyas were short, not disclosing these background stories, but we were left with the feeling that there was much which we had not understood.

The Dali Lama of Tibet lives in Dharmasala, Punjab district, in the foothills of the Himalayan mountains. We spent an hour and a half visiting with him and questioning him in regard to the habits and beliefs of the Tibetans. Knowing we would be visiting the Fiji firewalkers we asked him if the Tibetans knew of this phenomenon. His understanding was that those Tibetans who could perform such feats did so by identifying themselves with the vibration and nature of the elements. He indicated that in a sense they became part of the vibration of fire itself — a concept which was apparently a portion of their philosophy and understanding of the nature of man.

Later I purchased a small brass object called the Purba which, I was told, is used as part of one of the Tibetan ceremonies of healing. This is held in the smoke of the incense which rises from the Durchi, a ceremonial brass incense holder with a spear-like formation at the bottom. The Durchi had been plunged into the ground in order to purify the area of evil spirits. Then, after treatment by the incense smoke, the Purba is applied to the part of the body which is ill, touching it twice, much in the manner of forming a cross — this bringing about healing. Part of the preparatory activity is the use of what is called the singing bell; a bell of particularly high quality which is made to sing by rubbing a stick circularly around the bottom edge of the bell. These became specific momentos of our meeting with the Dali Lama and our association with the Tibetans.



Fiji Islander performing fire walking ceremony.



Tibetan Singing Bell.



Close-up of red-hot coals and heated rocks.

In the Fiji Islands, then, we actually saw ten men perform the ceremony of firewalking, and took moving pictures of the event which showed in rather remarkable detail the intense heat generated in the pit that had been prepared for four days for the occasion. After the ceremony was over — and this lasted only a matter of a few minutes — I had the opportunity to examine the feet of two of the firewalkers, one a 56-year-old man and the other a 14-year-old boy. They stated that the stones that they walked on felt only comfortably warm. Their feet showed no evidence of the application of any heat at all. One of the fascinating aspects of this practice is that these firewalkers are in a community of native Fijians who are Methodists by religious inclination. They state that if a man marries into the family that does the firewalking, he can also do it if he believes he can, but he is encouraged not to try it if he doesn't really believe that he is able. Such people, without belief, are painfully burned.

This custom has been described among the Hawaiian Kahunas who have performed this feat on hot lava and among the Hindu Yogis in India, as well as in Tibet and in certain South Sea Islands other than the Fijis.

We indeed wonder what it is that brings about healing of the appendicitis when one plunges steel needles wound at the hilt with gold wire into the flesh of sick people; why it is that gold collars would prolong the life span of birds affected with malaria; how it would be possible for sicknesses to be observed in the aura of a person — an aura that most of us do not see; what happens to the cells of a tumor when hands are applied to a woman's neck and a goitre disappears in minutes; how energy could flow from the hands of a "healer" and paralyzed legs could move spasmodically; how attraction by itself could work so dynamically that carbonized frog brain on the skin of a victim and cobra venom imbedded in the flesh of the body would be drawn together, healing the afflicted person; why Ayurvedic physicians could cure gas gangrene with herbs and an attention to the unity of the human beings; how the sound of a singing bell could enhance the health of a living being; and why, above all, certain humans among us can walk on fire and not sustain burns.

Answers to such questions are certainly not easy to come by. We can say very easily that these things described just didn't happen. This is the laggard's way out, the easiest way to maintain a closed mind and prevent growth of understanding in one's whole being.

But if we agree that the practice of medicine includes the whole spectrum of healing as it pertains to the human body, then we must be alert at all times for new understanding. The strange happenings reported here in all probability are related in some way, and when these relationships are understood, we may discover greater insights into what the physician is really dealing with when he tries to bring healing to the body.

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Background of William A. McGarey, M.D.

William A. McGarey, M.D., was born in Wellsville, Ohio, and received his early education there. He graduated from the College of the Ozarks in Clarksville, Arkansas, in 1944 with a Bachelor of Science degree and received his M.D. degree from the University of Cincinnati College of Medicine in 1947. His internship was taken at Cincinnati General Hospital, and he has been practicing medicine since 1948.

In 1943 he married Gladys Taylor, the daughter of missionary doctors to India. Gladys was born in India and received her medical degree from Women's Medical College in Philadelphia in 1946. Dr. William McGarey spent three years in the Navy during World War II and then, as a flight surgeon in the Air Force for two years during the Korean War. Following this, the McGareys made their home in Phoenix, Arizona, and have been in the practice of medicine there ever since.

Dr. McGarey has been Director of the Medical Research Division of the Edgar Cayce Foundation since 1965, and has been instrumental in activating a research program designed to evaluate concepts in the Cayce readings as they pertain to physiology and therapy. He has also originated an annual symposium held in Phoenix, Arizona, which is designed for the profession.

Dr. McGarey is a member of the county and state medical societies, the American Medical Association, the American Academy of General Practice, the Academy of Psychosomatic Medicine, and the North American Academy of Manipulative Medicine. He has authored papers on dreams, the psychedelic drugs, and a study of the use of castor oil packs in the practice of medicine, all related to the information found in the Edgar Cayce psychic readings.

Because of his familiarity with the psychic readings given by Edgar Cayce, Dr. McGarey has lectured and taught throughout the United States in conference, workshop, and lecture situations for the Association for Research and Enlightenment, the sponsoring organization.

THE CONTRIBUTIONS OF THE NOBEL PRIZE WINNERS IN PHYSIOLOGY AND MEDICINE

Three men whose careers have led to elucidation of the mechanisms of neurochemical transmission shared the Nobel Prize in Physiology and Medicine for 1971. These individuals were Sir Bernard Katz of the University of London, Professor Julius Axelrod of the National Institutes of Health of the United States, and Professor Ulf von Euler of the Karolinska Institute of Stockholm. Perhaps a brief synopsis of the work of each person and his co-workers will be of interest. The original publications are particularly excellent.

Sir Bernard Katz and co-workers: — "the transmitter substance at the nerve muscle junction, which has been known to be acetylcholine, is secreted or released even without impulses, spontaneously, at a very low rate, and comes out in large multimolecular packages of standard size. This spontaneous release produces a change in electric potential which one can register by inserting a microelectrode in the next cell. — We also have evidence that this activation of release sites involves the entry of calcium ions."

Professor Ulf von Euler and co-workers: — "Our work was concerned with the adrenergic neurotransmitter. — the transmitter substance in the adrenergic nerves did differ to some extent from adrenaline. It proved to be its demethylated homologue, noradrenaline. — the degree or extent of adrenergic innervation varies very much in the different organs. — The terminals of the adrenergic nerves were supplied with little beads or swellings at regular intervals. — Electron-microscope findings showed that these swellings contained particles of different sizes. The next problem was to find out how these particles store the transmitter and release it when a nerve impulse arrives."

Professor Julius Axelrod and co-workers: — "We found that there were two enzymes involved in changing and transforming the noradrenaline molecule. One was catechol methyltransferase, which carried out a very specific reaction, and another enzyme which was well known for many years, monamine oxidase. Most compounds when transformed became physiologically inactive, and we believed that these two enzymes were involved in ending the action of the transmitter. However, when we prevented the action of these enzymes, we found that the action of noradrenaline was still terminated. — Some of the transmitter goes into the blood vessels and is carried away. Another fraction is metabolized by the enzyme catechol methyltransferase. However, the major fraction comes back into storage in the nerve, and this is a very rapid and efficient mechanism by which the nerve complex ends the action of the neurotransmitter."

In many respects the history of the Nobel Laureates in Physiology and Medicine has reflected the progress of medicine during the twentieth century. The first such prize was awarded in 1901 to Emil von Behring, the discoverer of diphtheria and tetanus antitoxin. A study of these men and their remarkable contributions provides a lustrous heritage for the medical profession.

John R. Green, M.D.
Editor

AM *Editor's Page*

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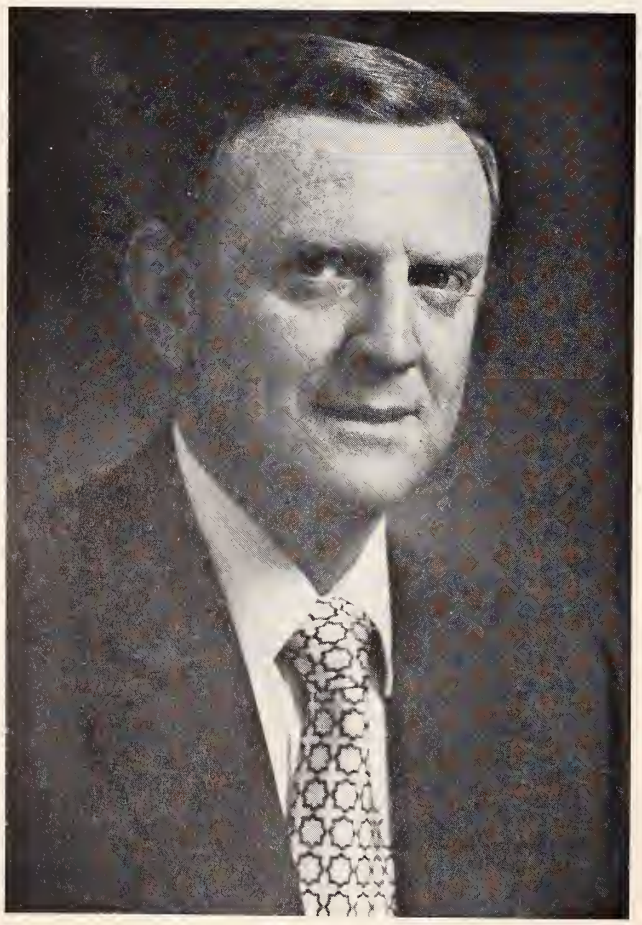
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President's Page

THE PHYSICIAN'S ASSISTANT: AN OVERVIEW



JAMES L. GROBE, M.D.

"P.A." or "physician's assistant" is big news in today's health care delivery crunch. The demand for health service, especially in behalf of the lower end of the economic spectrum, is stretching the ability of the existing medical system to the critical point. Concomitant demands for quick relief, reasoned or not, are growing.

Obviously, though Americas health forces are working overtime to produce new doctors and many new medical schools have opened their doors since World War II, it still takes a long time and a lot of money to increase the physician ranks. Many Americans familiar with the armed forces front-line oriented concept of corpsman health care, see no reason why the same approach should not be applied to a sorely strapped civilian system. It may be impersonal but it works, and politicians want quick solutions. The concept in that facet that envisions utilization of the talents and experience of returning Vietnam war medics, has wide general appeal.

I think we practicing doctors have to accept the fact of the doctor shortage, both in its gross and maldistribution aspects. It is not only undermining the public health, it is seriously threatening the health of the *corpus medicus*. We all face crowded reception rooms, overcrowded hospitals

and unhealthy time pressures. We could use a hand. At the same time, we must realize that the concept of the physician's assistant is more pervasive than just a stopgap; that if we empower assistants to help us care for the public we had better make up our minds that they will be here to stay and that they have got to be well trained, provably competent and legally and morally responsible. We can't say, "O.K., we'll accept physician's assistants now, but we'd like to reserve the right to forget about them if the manpower situation changes." Once committed we categorically accept the physician's assistant as a *bona fide* health professional and a member of the team.

It's pretty clear, then, that we in the medical profession have a responsibility to inform ourselves about the P.A. and, through our state associations, to help formulate intelligent medical policy concerning this new health professional. The American Medical Association and various specialty groups have been working with the Association of American Medical Colleges to draft "guidelines" and "essentials" for standardized educational programs for the P.A. The working definition on which educational planning is founded reads thus: "The physician's assistant is a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant." Just under 50 diverse programs exist now, in various institutions across the U.S.

One of the two big hangups in regard to the physician's assistant is accreditation of educational programs; who's going to accredit programs and thus exercise great power and control over the field. The AMA logically believes this is a job for its Council on Medical Education. It believes that education of the P.A. is directly relatable to professional education in medicine and should come under the council's generally acknowledged jurisdiction. It believes, too, that traditionally control over educational programs has been exercised by non-governmental, voluntary accrediting agencies and there is no reason why this program should be different.

California enacted a law in 1970 that placed a good measure of accrediting control under the state board of medical examiners. The AMA has agreed that this is an acceptable interim approach but that the matter should continue to be considered in light of developments. The bill before the Arizona legislature now, which would place P.A. programs under the state board of health is, in my opinion, bad. It not only would make accreditation a state agency function, it also would take the P.A. out of the realm of complete accountability to the doctor.

The other P.A. bugaboo is the legal accountability factor, licensure or certification, and the latitude of the physician in utilizing the P.A. According to Martha D. Ballenger, writing in the August issue of *Trustee*, the P.A. currently is, in most states, "an unlicensed, legislatively unrecognized person performing very responsible tasks amid a contingent of licensed personnel." She points out that many in the health field are concerned that some legal provision be made for such personnel in order that their present lack of recognition might not be construed by courts, patients and other members of the health care team as an indication that their activity is illegal.

"For example," she writes, "because the assistant will be performing many tasks formerly considered physician's functions, there is fear that he may be regarded as practicing medicine without a license and that his supervising physician may be regarded as aiding and abetting this criminal offense. Similarly, in civil actions, it is possible that lack of a license in a license-oriented field may generate an inference of negligence, if the unlicensed person, however fortuitously, harms a patient." She points out that legislative proposals are being formulated in a number of states, and that the populous states of Florida, Illinois and Michigan are considering proposals of the California type.

The AMA is moving purposefully but reasonably slowly. It favors national certification of the P.A. and is considering a system for such certification that would be based on a uniform examination to evaluate individual qualifications.

In whatever manner the physician's assistant program eventually works out, it will be helpful to a beleaguered profession. We need to be watchful, but not obstructive, circumspect but cooperative. It will take time, vision and a measure of altruism but I believe we are well on the way.

James L. Grobe, M.D.
President

Dean's Page

CLINICAL SCIENCES BUILDING AND TEACHING HOSPITAL

With the dedication ceremonies for the Clinical Sciences Building and Teaching Hospital on October 2, 1971, the completion of the original stage of development of the Arizona Medical Center which the University of Arizona had been authorized by the Arizona Board of Regents to develop in August, 1962, was accomplished. The nine-story teaching hospital was specially designed as a teaching hospital with consideration for the climate of Tucson. The exterior is largely of pre-cast concrete with recessed windows to reduce the effect of the bright sunlight which prevails in this area. Red brick was used in certain areas to lend architectural harmony with other University buildings. The 750,000-square-foot area represents the largest public building ever built in Arizona under one roof.

The interior of the hospital is color-coordinated throughout to give it a warmth not frequently found in large institutions of this type. Outpatient clinics were opened in August, 1971, and the inpatient services and emergency room were opened on September 1, 1971. The first patient was admitted to the hospital on September 1, and the first surgical operation was performed on September 1. On September 15, 1971, the first baby was born in University Hospital.

We ascertain that there will be three primary sources of patients who will gain admission to the University Clinics or Hospital. First, and by far the most important, will be patients accepted on referral from practicing physicians or, under certain circumstances, from community-based health agencies, such as the Neighborhood Health Center. Second, certain patients can be expected to arrive at the hospital in emergency circumstances. Care will obviously be provided in these situations although the patient's own physician will always be notified. Third, some patients will undoubtedly arrive at the hospital as self-referred. Those who have personal physicians will not be accepted at the University Hospital without their doctor's knowledge unless the patient requests otherwise.

University Hospital and Clinics are *not* endowed legally or financially to attend the needs of indigent patients. They have, on the contrary, been charged by the Arizona Board of Regents with responsibility to finance their own operations beyond the special teaching costs that accrue to a university teaching hospital. In accepting referrals, the needs of the patients and the needs of the teaching programs of the University will be taken into account, but in all instances patients admitted to the University Hospital will be expected to meet the cost of their professional and hospital care through such arrangements as may be appropriate in each instance.

The University Clinics and Hospitals were established by the Arizona Board of Regents to serve as a specialized resource in support of the health-related educational and training programs at the University of Arizona. We hope that all physicians in Arizona will avail themselves and their patients of the special services of University Hospital and Clinics.

Members of the Arizona Medical Association will undoubtedly wish to bring to our attention many questions not touched upon here. Certainly, it would be in order to address such questions to the Director of the Medical Center. Every effort will be made to provide answers where they are known.

Jack Layton

Editorial

TRAVEL AGENT



WILLIAM B. McGRATH, M.D.

People are like psychiatrists: We move backward into the future. We hardly know where we are going until we get there. The inexplicable perversity of the mind is such that we will not look at the map – or even draw one in the first place. We float along on a capricious raft of hindsight and luck.

A decided destination is easier to reach. "Reach" in this sentence is not a passive but an active verb, "to reach out."

The philosophy of the professional man (or parent, or simply man) is how he views himself, how he sees his role and purpose.

Most apt and most mature might be for him to see himself as a kind of travel agent. He will help another person find his way. But (1) he will not tell him where to go and (2) he cannot go with him.

1. Immature people expect the professional man to be an authority figure. But this perpetuates their immaturity and his own. Authority is judgmental and science is not. We cannot judge without first understanding. A person will never fully understand either himself or another. One might invert the Biblical injunction and apply it to one's self: Judge not thyself lest thou be judged. Or, wisely: Do unto thyself as thou wouldst do unto others. We would certainly take better care of ourselves.

A man submits that he is worried about his drinking. The officious doctor preaches to him: "You have liver damage. If you keep it up you will die of cirrhosis. You are ruining yourself and your family." The doctor is right and righteous – and so terribly wrong! Will he never learn to be helpful, to be constructive? To take away a person's self-esteem is always to take away his will power. The terms are not synony-

mous but, believe me, you cannot have will power without self-esteem.

Another physician might have put it differently: "You are fortunate because your liver will still heal itself." And in effect he will convey that the patient will not be afraid to quit drinking when his need of alcohol as an anodyne can be resolved. This would be literally encouraging.

We are immature when we think of ourselves as authorities and others as submissive. We are not smart enough to tell a person where to go. He tries to tell us his desired destination and we will help him to draw the map.

2. But neither are we companions. We cannot go with him. This is the gist of our unrelenting attack on relationships.

To function as a travel agent, to be as helpful as you can, you have to divest yourself of all other uniforms; you have to step out of every relationship. This is difficult but it can be done and it must be done.

Let us consider a few intimate examples. Why is your child so much more polite and considerate in someone else's home? And, reciprocally, why are other adults so courteously interested in your child? Because he is not their child and they are not his parents. The fleeting relationship of guest-to-host almost always exhibits a mutual helpfulness and tact which one's own household might envy.

If your son is dishonest with you, we call him a liar. But may we look at you to see why he found it necessary to lie to you? The fault is in the fact of the father-son relationship. If you could for a moment set aside the relationship, you could invite and easily obtain the lad's complete confiding. One never has to lie to a stranger.

Take two statements. "He will be good to his wife" or "He will be good to that other person." Do you see that there is a world of difference? If a man would look at his wife not as his wife but as another person he could start over. He would find her very interesting. He could ask and really want answers to a hundred questions, questions which in their husband-wife relationship he will never ask and she will never answer. He could show "that other person" all the thoughtful kindness which is so natural to him, not as a husband but as himself, a person. Admit it: you are not as good to your wife today as you were on the day you met. And neither of you has ever again felt free to be completely open and unselfish and honest with each other.

Relationships are always possessive, always depersonalizing, always destructive of honesty.

A man must try to keep his own identity. And with the same mental scissors he must allow others to keep their identities. There is no real difference between his professional and his personal life. If he is to assume the role which we have epitomized as travel agent then he and they — especially those closest to him — must remain strangers.

Does this sound solitary and a bit tragic? No! One respects a stranger, one can afford to be totally honest with a stranger. We will really try to get to know and understand a stranger. And one will try to help a stranger on his terms and no one's own. Paradoxically, if we see one another as strangers we can have a new beginning without the strain and crippling loneliness of relationships.

A.M.A. Delegate's Report

THE RIGHT TO MEDICAL CARE



SEYMOUR I. SHAPIRO, M.D.
DELEGATE TO THE AMA

Philosopohy, ethics, and semantics were involved in the discussion when the American Medical Association at its Atlantic City meeting reconsidered its position that "everyone has the right to medical care."

This simple statement has been subject to several interpretations, even alleged partial denial by a former American Medical Association president! It has resulted in the bewildered acceptance by the medical profession of a challenge to shoulder the responsibility for the provision of the entire spectrum of health care to the entire population. Those segments of health care outside of physician-controlled medical care are added to the profession's responsibility, because they are "doctor-generated."

Among the opinions voiced by the delegates were the following:

The public has lost sight of its responsibility to seek medical care made available by the profession, and its responsibility for the socio-economic aspects of health care, including education, nutrition, hygene, recreation, environment and institutional care.

Forgotten, have been the "rights" of the physician. The right to choose whom he will serve. The right to determine the conditions under which he will render his service. The right to exert his maximum effort in behalf of his patient, unhampered by defeating restraints, regulations and red tape.

Without these rights, the quality of medical care is compromised. Physicians of good conscience cannot participate wholeheartedly in a system which hinders their ability to provide the highest quality medical care of which they are capable. In short, a right cannot be honored if it impinges on the rights of others.

Such considerations prompted the introduction of resolutions by the Kansas and California delegations, designed to modify the American Medical Association stance. Despite some opposition at the reference committee hearing, and the proposal of a lukewarm substitute resolution by the committee, the House of Delegates on June 23, 1971, adopted the California resolution:

> ". It is the right of every citizen to have access to adequate medical care, but it is the responsibility of the citizen or of society to seek it. The American Medical Association will use all means at its disposal in an endeavor to make adequate medical care available to meet the needs of each person. In the spirit of inheritance of the Oath of Hippocrates, the American Medical Association reaffirms its obligation to humanity. In this effort, the American Medical Association cannot assume the responsibilities of government or the individual citizen. The American Medical Association also recognizes the right of the physician to choose whom he will serve and the conditions under which he will render this service. These are integral essentials in the delivery of quality medical care."

A majority of the delegates believed the statement to be necessary, forthright and comprehensive, and one that we can support and defend.

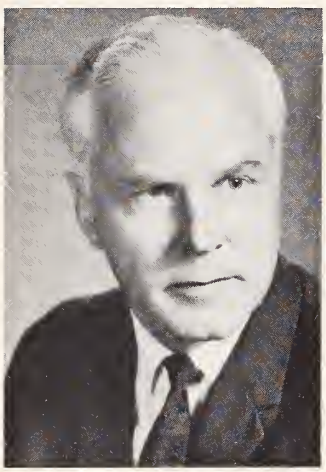
Others, including Dr. Russell B. Roth, Speaker of the House, urged caution, and advised against reopening old wounds. Most of the opposition questioned the wisdom of proclaiming our position at this time.

In retrospect ,we are left with two questions:

1. Do we agree with the content of the statement?
2. Should it have been said?

Topics Of Current Medical Interest

A CONVERSATION WITH THE ASSISTANT SECRETARY FOR HEALTH AND SCIENTIFIC AFFAIRS



On July 1, 1971, Dr. Merlin K. DuVal took a leave of absence from his duties as Director of the University of Arizona Medical Center and Dean of the College of Medicine to assume the post of Assistant Secretary for Health and Scientific Affairs at the Department of Health, Education and Welfare. How does he view his new role and what is his thinking regarding some of the major issues in health today? In this composite interview for ARMP News, Dr. DuVal explores some of these questions.

News: Dr. DuVal, you are the third man to fill the Assistant Secretary position. What does the job consist of?

Dr. DuVal: The post was created in the late 1960's at the time that the Department of Health, Education and Welfare was reorganized. Prior to that time, most of the health focus in Washington was through the U.S. Public Health Service, the senior officer of which was the Surgeon General of the United States. The Surgeon General role was changed in the federal reorganization in the late 1960's and the authority to pull together all the lines related to federal health programs was reinvested in a new position called the Assistant Secretary for Health and Scientific Affairs. The first incumbent in that position, who worked with Secretary Gardner, was Dr. Phillip Lee. Dr. Lee left and went to San Francisco and you will recall, I think, the enormous controversy which followed relative to the selection of the second person to fill it. We lost six or eight months in there when it went unfilled and finally it went to Dr. Roger Egeberg. Then, as you correctly noted, the third person to fill the slot is myself.

News: Both of your predecessors have had relatively short terms. Can you cite the reasons for this?

Dr. DuVal: I imagine that the best way to answer that would be to say that it's due to the job description itself. In the federal government, the investment in health, as a whole, is very large. Immediate reseponsibility for a substantial part of that rests with the Assistant Secretary for Health and Scientific Affairs. He is the senior officer of three very complex agencies, one of which is the National Institutes of Health and one of which is the Health Services and Mental Health Administration and one of which is the Food and Drug Administration. Each of these is an enormous agency. Under the circumstances, the complexities of guiding three large and diverse agencies makes the job of Assistant Secretary possibly "not do-able" so, in a manner of speaking, we've still got this job on trial.

News: Has President Nixon indicated to you

personally the thrust he would like to see taken with respect to health?

Dr. DuVal: Yes, he has. He has a firm belief that while we have some very substantial problems with respect to health in the United States, the surgery presently being proposed in some quarters is entirely too radical and it would be better for us to refocus our energies on the parts of the system that are strong and build from there; correct the deficits from that position. That is the President's posture.

News: What are some of these deficits as you see them?

Dr. DuVal: To answer that properly I have to back up to a change in public policy that occurred almost imperceptibly during the mid-years of the Eisenhower administration. At that time, specifically on the occasion of a White House Conference on Aging, a new public policy began to be articulated to the end that access to quality health care at a reasonable cost was actually a *right,* rather than a privilege. In the intervening years this concept caught hold and has, in fact, been adopted in the thinking of the citizenry. Now, this is not a minor shift in public thinking, it is what all the furor in health today is about. The key words are *access, quality* and *reasonable cost.* Let me take them one at a time. When you talk about access you are immediately talking about geography — that is, the geographic proximity and convenience of health services to those who need them. You are also talking about education and culture in that you can live right next door to a physician but if you are not accultured to using his services, or are not aware that they are available, you really don't have access to them. Third, you are talking about supply and demand. Access is a function of manpower and no matter who you are or how rich you are, if every doctor's appointment book is filled from now until September 1st, you do not have access to health care. With regard to quality, suppose we could double medical school enrollments and increase all kinds of manpower. In so doing, we might be seriously diluting the quality of the ultimate services to be rendered. One of the most vexatious problems currently being dealt with on the American educational scene in medicine is that of maintaining a standard of excellence in our professional schools at the same time that society is asking us to double enrollments. The last item I mentioned is cost. Here we get into such factors as technology outstripping our ability to absorb it into the system, and the currently disparate method of financing health care.

News: Can you give us a glimpse of some of the areas you will be active in with respect to these problems?

Dr. DuVal: I think so; at least in an abbreviated way. We're primarily interested in supporting, at this time, a program that derives from the administration which is focused on trying to bring a better balance into supply and demand in the health industry — that is, number of physicians, nurses, other manpower and the needs of the people, financing devices, such as insurance, and in techniques for changing the distribution of health services. The President's focus on the latter is an entity called the Health Maintenance Organization. So, there'd be three big areas: health manpower, distribution of health services and financing of health care.

News: What do you foresee being done to improve health care for the poor?

Dr. DuVal: I think there are a number of things that can and will undoubtedly be done. One is, I think, that we will be moving much more in the future into the area of broad public education having to do with health. I like the term "activated patient." It refers to the fact that if, by one program or another, you can break through cultural barriers and help your patients start understanding more about what sickness is and how it can be prevented, you can get them into the system of health care earlier. As a result of that, you will reduce the cost of being sick because, by getting them in sooner, you can focus on preventive medicine instead of having to use your expensive hospital facilities to make them well. Secondly, I think you will see wider use of insurance systems to help meet the costs of those who are poor. I am supporting the President's proposal of a joint, employee-employer program, and the family health insurance package that is coming down the pike. Third, I think you will see new programs for distributing health services. I think you will find more and more physicians are going to be giving more of their time to leaving their offices and going to other areas where they're needed in the community, dispensing services to persons who don't have physicians in their midst. In rural areas this will be accomplished through new technologies and devices where we may have paramedical type persons communicating pa-

tients' symptoms directly to the larger health centers by live television, rendering immediate service to persons right there where it's at, so to speak. Many such things, I think, will appear on the horizon.

News: It would appear then that you definitely feel that there is rich man's medicine and poor man's medicine. Is there, in your view, a definite difference?

Dr. DuVal: Yes, there's no question about it. Clearly, in a system of the type that we operate in the United States, if you can afford to purchase fine medical care, generally you will get fine medical care if it is available. If you cannot afford it, you may find it to be an elusive commodity. I would qualify my answer, however, and say ironically that those who are *very* poor tend to get very good medical care because it's given them either by government or, in many instances, free by the members of the health professions. It's the group in between that really has the big problem — the kind of a person who may be head of the family and has a job and is able to meet his bills from month to month, has got a down payment on his home and is paying off his mortgage and he owns one car and his children are getting through school — if he has any kind of major illness, he can be wiped out.

News: How can these people who are on the middle ground survive in this costly medical world that we have?

Dr. DuVal: Well, I think the first step is to acknowledge that everybody has and should have a personal stake, so to speak, in his health and he should be paying for good health to a reasonable extent. The problem that we have is that this reasonable extent may now be disproportionate because the cost of being sick is so great. This means that the solution's got to be in some form of health insurance and we do have that kind of insurance in the package that we're going to attempt to see through the Congress.

News: Would you care to speculate as to when we might see a national health insurance plan?

Dr. DuVal: I would think it's reasonable to expect that national health insurance of some form will become probably a serious issue, that is to say, at the Congressional level, in the spring of 1973. Congressional hearings may begin later this year and into next year but they will not have reached the point, I think, at which they will have settled the questions prior to the presidential campaign. This means that it will be an issue in the presidential campaign. The Congress that comes into session after that, which would be in January of '73, would then be able to treat the question. That is a speculative calendar but not, I think, unreasonable.

News: To what extent will local planning play a part in the shape of things to come in health?

Dr. DuVal: I don't think I'm rash when I say that among the most exciting things happening anywhere in the health field in the United States is the phenomena of local planning. But let me come at that in this way. There are conceivably two ways to rationalize the multiple factors involved in providing access to quality care at a reasonable cost. The first is, if you are clever enough and you can get enough minds together in a room, or figuratively speaking behind a desk, you can theoretically come up with a perfectly programmed society in which all these factors are brought under control — and you can then regulate what you do. There is no evidence in any country in the world that a totally programmed society works, human nature being what it is. Furthermore, to most of us this is not an attractive solution to the question of how to bring these diverse forces together. The second approach is one in which you start by acknowledging that there are certain weaknesses in the present system, and that our concern should be on their correction. We think this is the better approach in that it is more nearly in the interest of society to proceed this way. The vehicle that has been provided in the United States to attempt to do this is known as Comprehensive Health Planning. It's a Bill that came down from the 89th Congress and what it does is permit people to sit down and decide locally, in their own communities, what their problems are and what the solutions to these problems should be. To a large extent, much of what happens in the future with respect to health will hinge on the effectiveness and flexibility of such local planning.

News: Dr. DuVal, as you know, you have the sincere good wishes of all of us in Arizona as you approach your new responsibilities. Can we expect to see you back in Arizona in the future?

Dr. DuVal: I expect to serve out the term that I've been invited to serve, which is 18 months, and then we'll have to look at the future after that. Currently, however, it is my intention to return to Arizona at that time.

Reprinted from ARMP Newsletter August 1971.

Letters to Editor

Honorable Barry Goldwater
United States Senate
Washington, D.C. 20510

Dear Senator Goldwater:

Thank you for your April 26 letter on behalf of your constituents with respect to their interest in our proposed poliey statement on drugs in fixed combination. Please accept my apology for the delay in answering your inquiry. Your letter has been forwarded to our Hearing Clerk.

For a variety of reasons, there has been widespread misunderstanding about the FDA policy on combination drugs. To correct this and to be helpful, we want to explain our combination drug policy to you.

As we review the several hundred physician letters that have come to us objecting to the proposed policy, a number of themes emerge.

The first is that drug combinations should not be banned by an across-the-board policy statement. We agree.

Second is the assertion that many drug combinations are safe and effective for their intended uses, while others are not. We agree with this, too.

Third, the point is made that the practicing physician has not been consulted adequately; that the practicing physician is the one who knows best about drug effectiveness from his daily observations with his patients; and that the policy proposed is a product of "ivory tower" thinking of bureaucrats or academicians out of touch with the realities of patient care. Actually, we did consult with many knowledgeable practicing physicians before proposing this policy. We now have heard from a great many other physicians, and we are considering all views. Most would agree that drug effectiveness has to be evaluated on the basis of controlled studies, whether they be carried out in the physician's practice or in a medical center. What we ask and what the law requires is that claims of effectiveness be supported by evidence derived from adequate clinical investigations on the basis of which it can be concluded responsibly that any drug will have the effectiveness it is represented to have and which it purports to possess.

The next major objection is that the policy we propose will greatly increase patient cost and will confound both prescribers and pharmacists in prescribing and in compounding drug mixtures. The last is said to introduce problems of quality control, drug compatibility, and patient acceptance of needed medicines. None of these is a reality. If a drug combination is medically justified, there is no reason why it should not continue to be available from the pharmaceutical manufacturers. If it cannot meet reasonable standards as to safety and effectiveness, there is no patient convenience and economy in taking an irrational or even harmful drug mixture.

As we have indicated, we are not against fixed dose combinations. There is now and always will be a place for good combination drugs.

Our policy on drug combinations is remarkably simple to state and to defend. The fundamentals are: that more than one drug should not be used when one is all that is needed; that drugs in fixed combination should satisfy the needs of a population of patients who require concomitant treatment by the two or more drugs in the combination; that there be no incompatibility between the components; that the dose of such components be appropriate for the intended patients. In addition, a combination is appropriate when the added ingredient enhances the effectiveness of the main active ingredint

and when an added ingredient minimizes the potential for abuse of the main active ingredient.

There can be no serious medical dispute about this. The Council on Drugs of the American Medical Association, the Council on Drugs of the American Pediatrics Association, the American Pharmaceutical Association, the *United States Pharmacopeia,* leading textbooks, and the leaders of the medical profession have consistently expressed the need for a sound medical rationale for using drugs in fixed combination.

We trust that you will agree that the above requirements are reasonable and, if followed, will help bring about better therapeutics and the availability of better drugs.

We recognize the need for us to put before the profession what is actually being proposed so that the physician can speak to it rather than to something that has not been proposed.

We will welcome your response after considering the points we have made.

With kindest regards,

Sincerely yours,

Charles C. Edwards, M.D.
Commissioner of Food and Drugs

Arthur V. Dudley, Jr., M.D.
Building 23 Medical Square
North Tucson Boulevard at Lee
Tucson, Arizona 85716

Dear Dr. Dudley:

The Commissioner of Food and Drugs has responded to my comments on the proposed fixed combination drug policy, and I am enclosing a copy of that response for your information.

This outlines the major arguments presented to the FDA by the medical profession and indicates the position of the FDA with respect to each. It would appear that the objectives of the FDA and the medical community are the same — the safety and convenience of the public — and that the fear that a sweeping ban will take effect indiscriminately is unfounded.

It appears, too, that the views of the practicing physician are not being ignored, but are being sought and considered thoroughly, and in this respect, I would repeat Dr. Edwards' solicitation of further comments in response to this clarification of the FDA's intent.

Sincerely,

Barry Goldwater

John R. Green, M.D.
Editor, Arizona Medicine

As a dues paying member of ArMA, I am dismayed by Dr. Langston's statement that "political education dollars are provided by . . . *and a grant* from the Arizona Medical Association."

Reposing full confidence in the probity of ArMA's officers, nevertheless I wish to know the amount of the grant and the specifications for use of the monies.

What are the guidelines? Who are the educators? What is the audit?

Who is accountable and to whom for expenditure of the Grant Funds?

Grant funds are not casual dollars; they are taxpayers' (in this case, dues-payers') dollars.

Thank you for your attention.

Clarence L. Robbins, M.D.

John R. Green, M.D.
Editor, Arizona Medicine

Dear Doctor Green,

I have read the letter from Clarence Robbins, M.D. and thank you for the opportunity of replying. My reply follows: I regret the confusion caused by the terms, 'Political Education Dollars' and 'Political Action Dollars'. Political Action Dollars are the easiest to understand. This is monies derived 100% by voluntary membership dues in the State Political Action Committee. No funds for this are given by the Arizona Medical Association. It is this money that is used for direct candidate support; i.e., direct cash to a candidate or a formation of candidate support committees for their expenses.

Besides candidate support, ARMPAC has a second function. This is to make the members of ARMA aware that politics now affects medicine and, hopefully, get them involved with the party of their choice. I would prefer the term, 'Political Awareness Dollars' but 'Political Education Dollars' is more commonly accepted. Like any continuing committee of ARMA, we receive funds to carry out this function. Doctor Robbins asked for an audit and I am most happy to comply. This year ARMPAC has purchased stationery and envelopes, $50.82, postal cards $10.40, an airline ticket for Congressman Steiger $318.00, hotel rooms for Congressman Steiger and Mr.

Wayne Bradley of the American Medical Association, $41.07, and a bank service charge on our account of 59¢. The total expenditure is $420.88. Congressman Steiger was the speaker at our annual banquet this year during the ARMA convention. He received no fee other than the transportation and room. From the report of the public relations organization employed by the Arizona Medical Association, excellent publicity for his appearance was obtained by the Arizona Medical Association.

Doctor Robbins left out a portion of a sentence he quotes. In total it reads, "Political Education Dollars are provided in Arizona by proceeds from our annual banquet and a grant from the Arizona Medical Association." The net proceeds from the banquet, that is, monies received for tickets purchased minus the cost of this banquet exclusive of Congressman Steiger was $327.95 which was placed in the education fund. Our total education audit is $420.88 minus $327.95 equals $92.93. This $92.93 is the total amount from the Arizona Medical Association that ARMPAC has spent this year. I believe that this will compare very favorably with other committees of ARMA. Although the sum is not great, in my article I wish to be entirely candid and mention our money from ARMA.

Who is accountable? I as chairman of ARMPAC. To whom? I appear at each ARMA Board of Directors meeting or in less than one-fourth of the meetings that I can not personally appear, I send a written report. At these meetings, I report on our activities, our plans and am open for questions and instructions from the Board. This avoids any suspicion of secrecy about our activities. I know of no other committee that makes such frequent reports to the Board of Directors.

Occasionally, the question of the legality of the Medical Association being involved in politics is raised. Studies by the legal staff of the American Medical Association and the Arizona Medical Association and the American Political Action Committee have shown it to be entirely legal as long as two separate funds, that is Action and Education are kept separate. We do this meticulously. No funds from the Arizona Medical Association, no dues dollars have ever or will ever be given to a candidate.

Sincerely yours,

Don Val Langston, M.D.

In Memoriam

WALTON C. FINN, M.D.
1904-1971

Walton Chaffee Finn, M.D., died May 14, 1971 in St. Joseph's Hospital, Tucson, Arizona. He was sixty-seven years old.

Born in La Fox, Illinois, May 14, 1904, he received his primary education in Santa Ana, California. While attending high school he was selected as a member of the group of gifted children studied by Leland Terman of Stanford University. He graduated from Santa Ana High School and went to Pomona College 1922 to 1923. He attended the University of Wisconsin, receiving a B.A. degree in 1926, and Washington University School of Medicine, St. Louis, Missouri, receiving his M.D. in 1929. Dr. Finn served his internship at Wisconsin General Hospital in Madison, 1929 to 1930. Took up General Practice in Fond du Lac, Wisconsin, where he remained till 1952. His medical practice was interrupted by World War II, when he served with the U.S. Army. He attained rank of Lt. Colonel and was awarded the Bronze Star for Hospital Care rendered during his service in the Pacific Theatre of War. In 1950, Dr. Finn served as President of the Fond du Lac Medical Society.

In 1952, he moved to Tucson, Arizona, where he took up General Practice. From 1953 through 1967, he served as Director of the Southern Pacific Hospital, now the Carl Hayden, here in Tucson.

He was a member of the Arizona Academy of General Practice, served as its President and was also a member of the A.A.G.P. National Hospital Board. Organizations he belonged to included the Catholic Physician Guild, Hypnosis Society of Arizona, Sierra Club, Elks Club, and Tucson Country Club.

Richard C. Finn, M.D.

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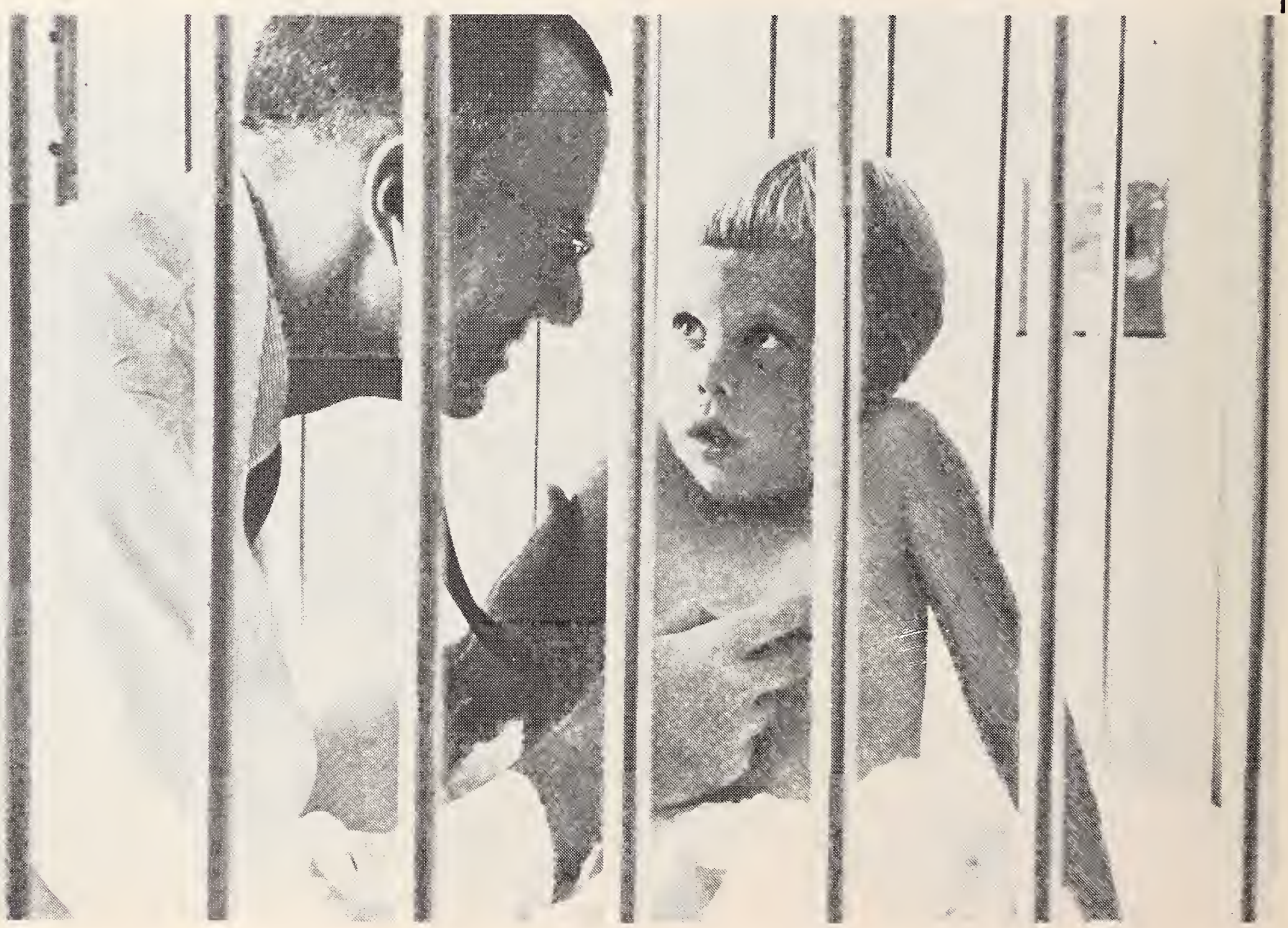
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Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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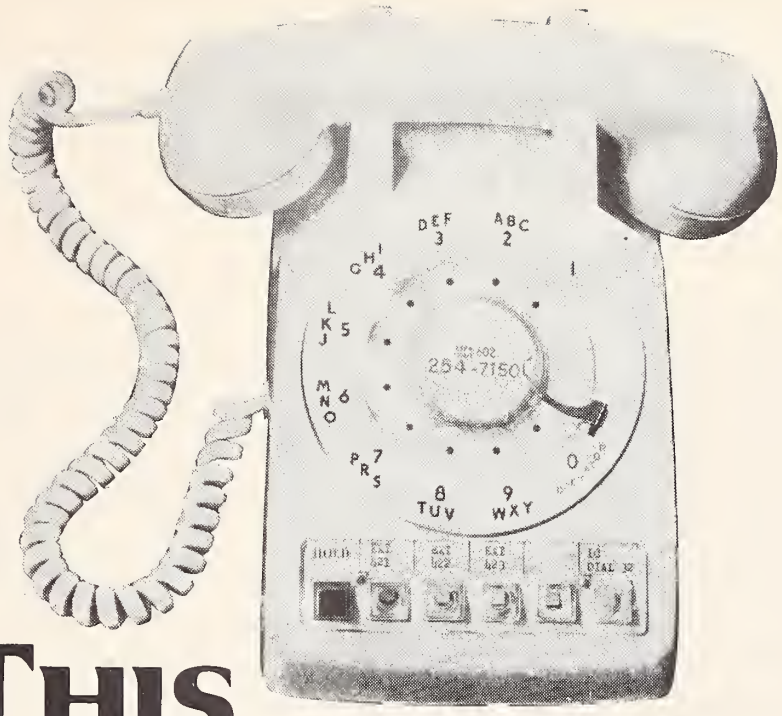
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Where: Mountain Shadows
When: Saturday, November 13
Time: 9:00 a.m. to 3:00 p.m.
Cost: $15.00 – Includes Coffee & Doughnuts; Lunch & Hospitality Hour

Agenda

9:00-10:45 *PROFESSIONAL INCORPORATION – LEGAL & ACCOUNTING CONSIDERATIONS*

A prominent Attorney and Certified Public Accountant will discuss pending legislation and IRS thinking with regard to the P.C.; Keogh vs. the P.C.; tax considerations; financial discipline of a P.C.; pension versus profit sharing; specific accounting problems relating to professional incorporation, etc. – There will be a Question and Answer period.

10:45-12:00 *THE PROFESSIONAL CORPORATION – INVESTMENT CONSIDERATIONS*

Topics discussed: Alternative investments and bank trusteeship arrangements; The need for independent professional investment counsel; The YSP method of evaluating investment advisors and investment performance.

Speaker: Bob McDonald, Vice President
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Pension Evaluation Department

12:00-1:00 *LUNCH*

1:15-3:00 *UNIQUE PORTFOLIO STRATEGIES FOR THE PROFESSIONAL CORPORATION*

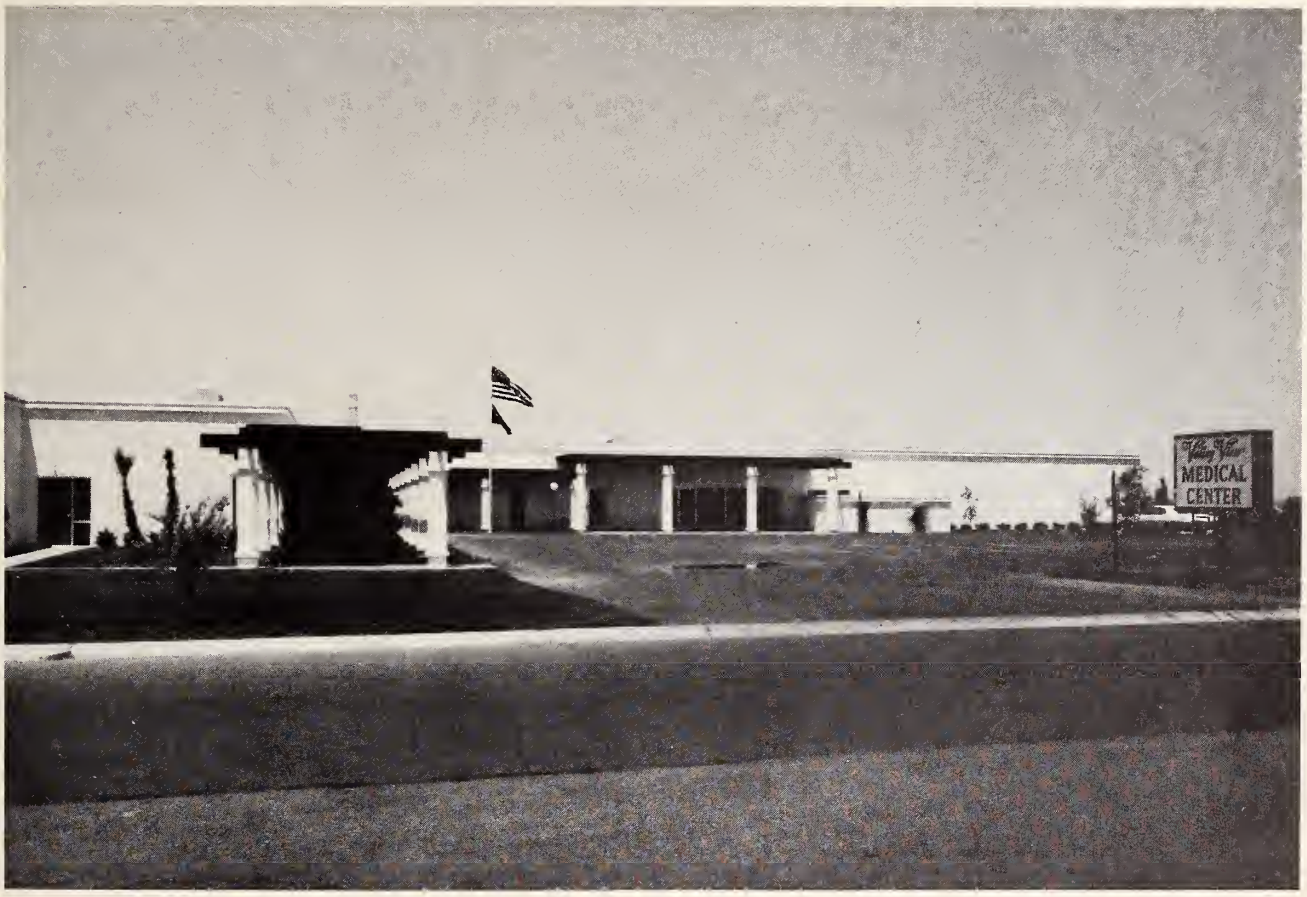
Speaker: Martin Gooen, Director of Research
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3:00-4:00 *HOSPITALITY HOUR*

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CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

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2. DATE OF FILING: 9/13/71
3. FREQUENCY OF ISSUE: MONTHLY
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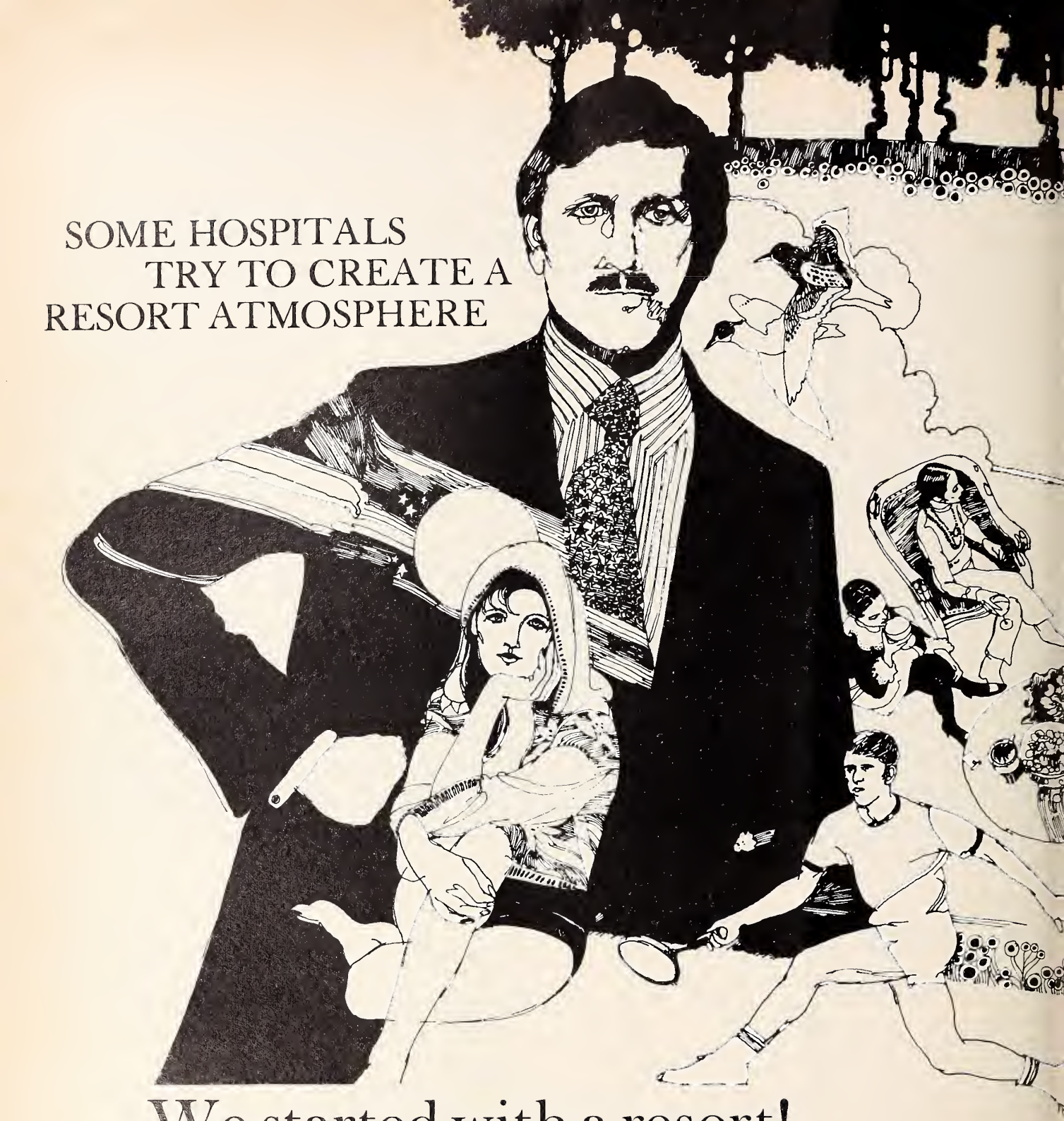
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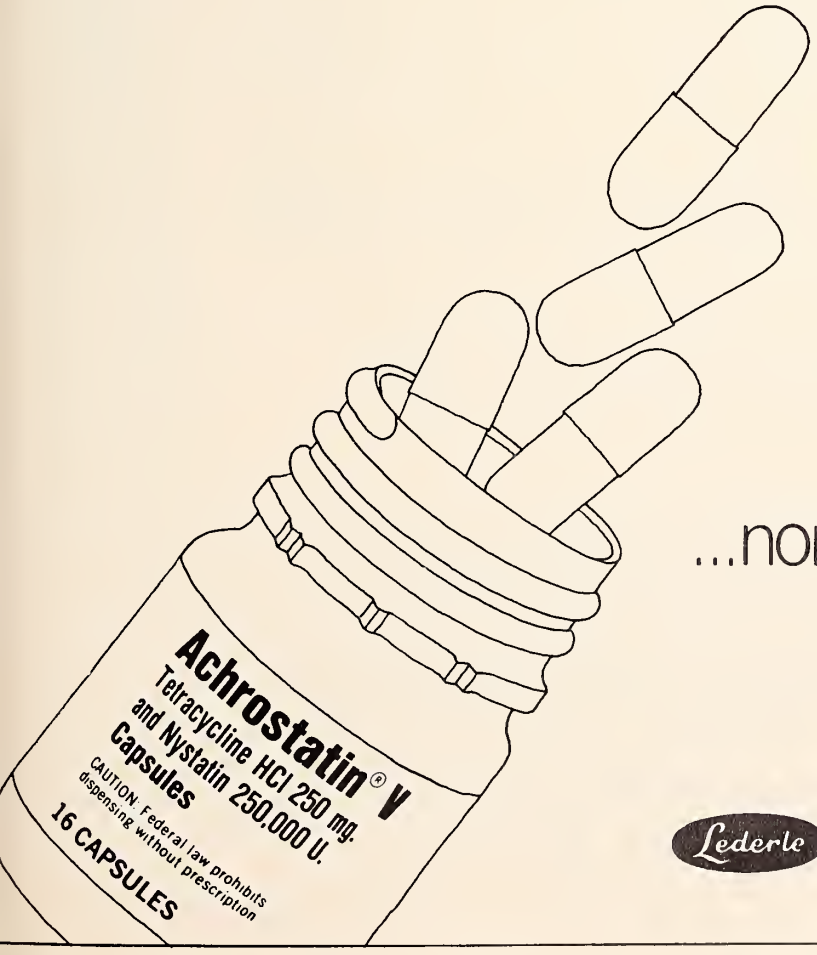
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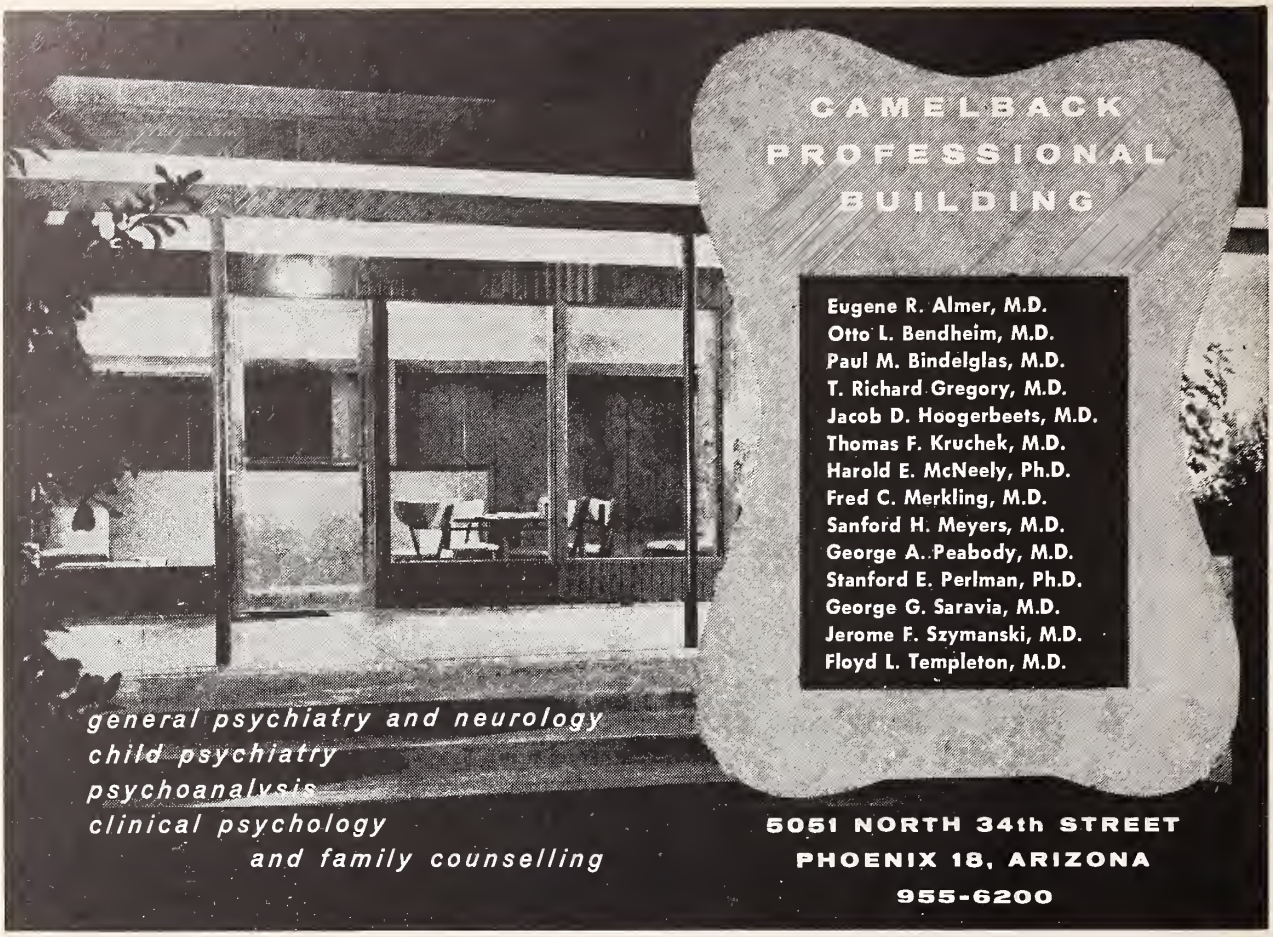


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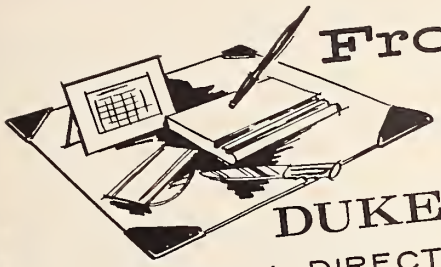
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1971 SYMPOSIUM

MEDICAL AND PSYCHIATRIC INSIGHTS ON "YOUTH AND THE FAMILY IN A CHANGING SOCIETY"

Under the auspices of:
Arizona Psychiatric Society

In cooperation with:
Maricopa County Medical Society and The Arizona Medical Association.

Sunday, November 14, 1971
1:15 p.m. to 5 p.m.
Safari Hotel
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Scottsdale, Arizona

Geigy Symposia Series CIII

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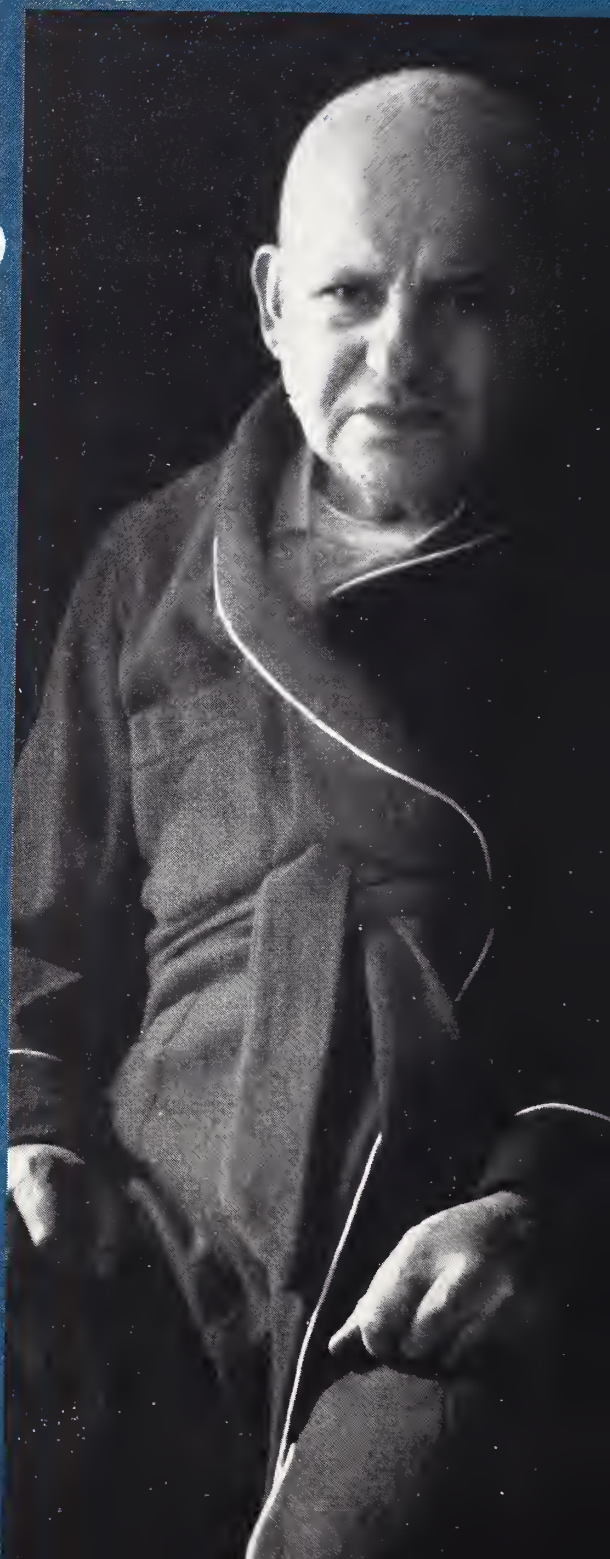
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Profile of insomnia

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NOVEMBER, 1971/VOL. 28, NO. 11

ARIZONA MEDICINE

JOURNAL OF ARIZONA MEDICAL ASSOCIATION • MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

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alium (diazepam) as an adjunct
skeletal muscle spasm can
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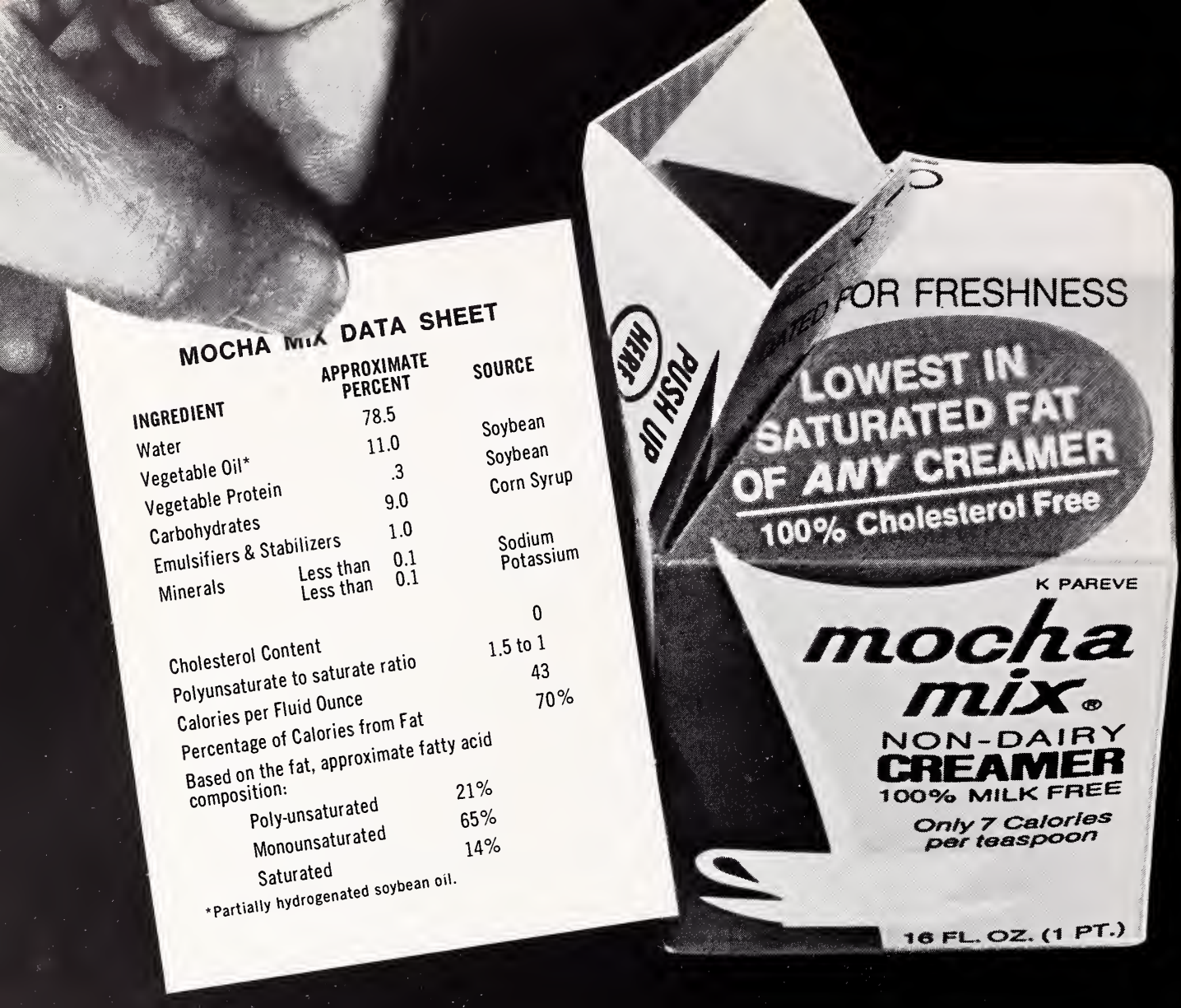
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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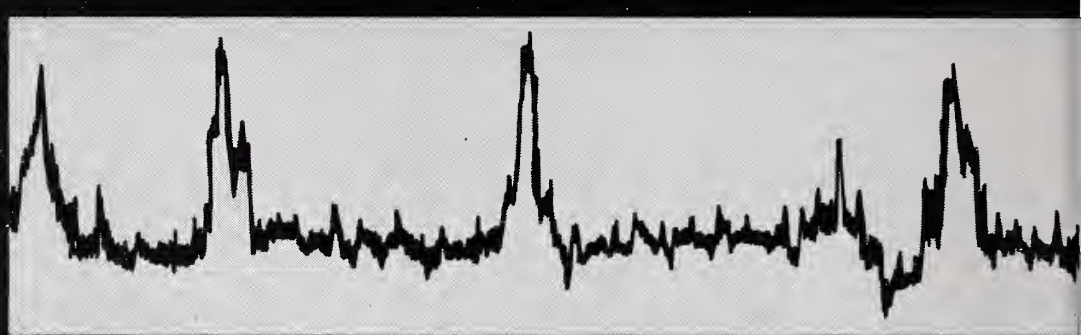
(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

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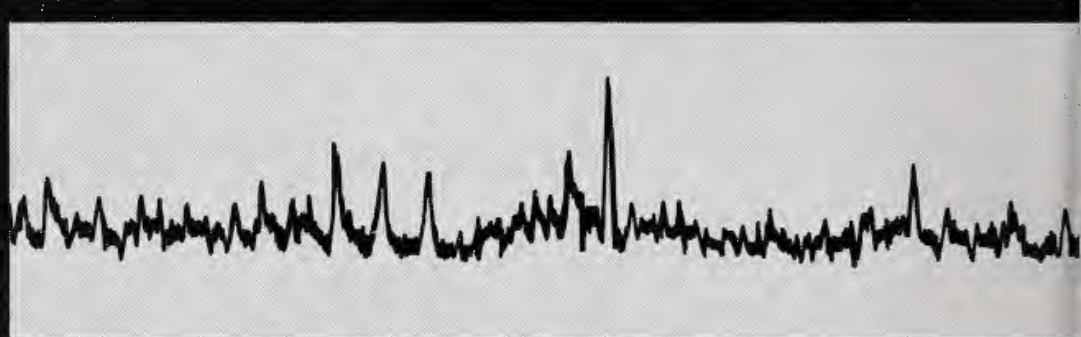
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An intestinal autobiography of rage, contentment and horror

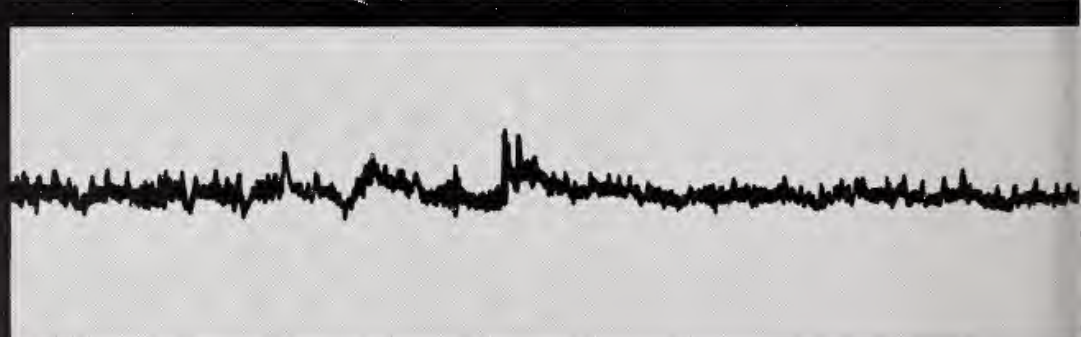
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"The motility that day was quiet. This type of recording is seen regularly when he is relaxed and contented and the laboratory seems peaceful."*



He was overwhelmed by "paralyzing horror" when told he would need a partial laryngectomy for removal of an early carcinoma; "...the activity of the ileum virtually ceased for over a five-minute period...."*



Background

*Data presented here derive from a 13-year ongoing study by Henry Harrison Sadler, M.D., and Aline Underhill Orten, Ph.D., at Wayne State University. Their findings, which demonstrate a correlation between the emotional state of a human subject and the motility of an isolated segment of his ileum, were published in the April, 1968, *American Journal of Psychiatry,* volume 124, page 1375.

The subject is a 56-year-old man with a 40-c Thiry loop of ileum created as a result of emergency surgery. A person of modest attainment and simple tastes, the subject depends on the investigators as he might hi own family. His full-time job is as a "human laboratory," and throughout the 13-year per of the study, he has taken great personal pr in his own participation.

A story charged with emotion

The graphs on the facing page are intestinal motility readings on a human subject experiencing the emotions of rage, contentment and horror (see "Background" below left). This "intestinal autobiography" dramatizes the point that certain emotions correlate with specific patterns of G.I. motility.

The visceral clutch and functional G.I. disorders

The gut response to stress has been amply demonstrated in many functional G.I. disorders. Nervous diarrhea and irritable colon syndrome, for example, are disorders associated with abnormal G.I. motility. And these disorders are commonest among patients sensitive to life-stress situations productive of conflict and excessive anxiety.

Librax® calms anxiety, calms the gut

In these areas of G.I. pathology, Librax has become a mainstay of adjunctive therapy. Reason? Effective two-way calming action. Librax, by relieving excessive anxiety, not only helps calm emotional overreaction to stress, it controls intestinal hypermotility, too. Depend on Librax—the only drug that combines the well-known antianxiety action of Librium® (chlordiazepoxide HCl) and the potent, dependable antisecretory/antispasmodic action of Quarzan® (clidinium Br).

1 or 2 capsules, 3 or 4 times daily in the treatment of nervous diarrhea and irritable colon syndrome

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

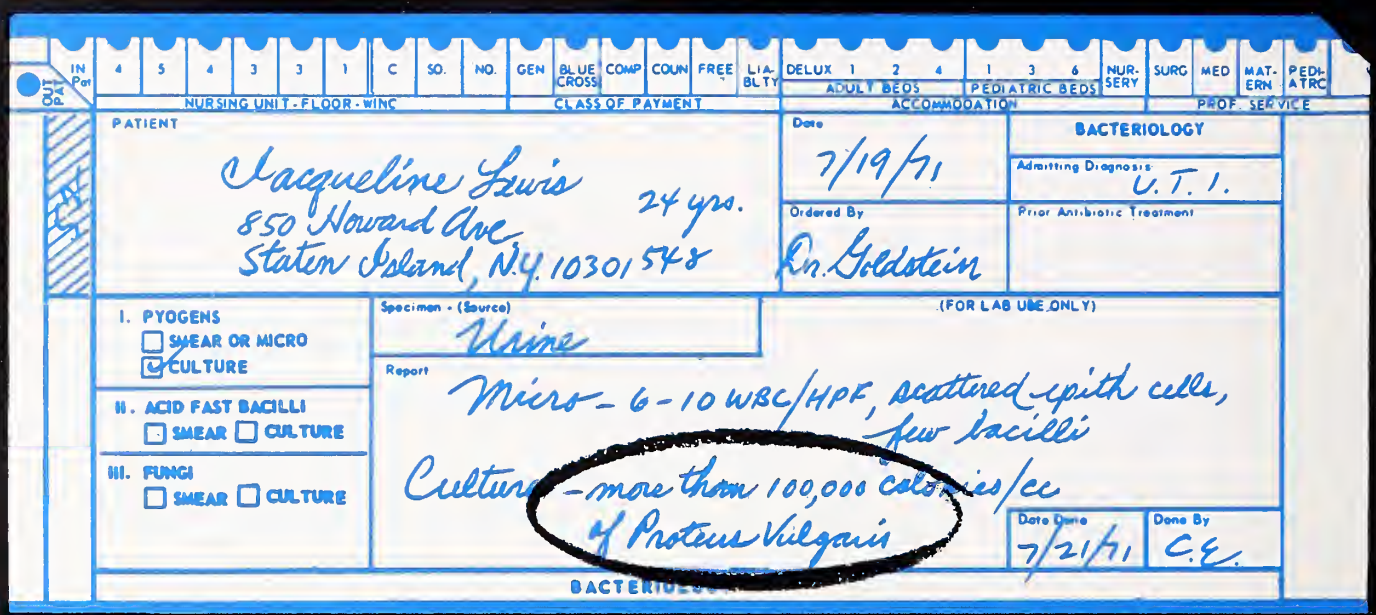
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PATIENT

Jacqueline Lewis 24 yrs.
850 Howard Ave
Staten Island, N.Y. 10301 548

Date: 7/19/71

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Admitting Diagnosis: U.T.I.

Ordered By: Dr. Goldstein

Prior Antibiotic Treatment

I. PYOGENS
☐ SMEAR OR MICRO
☑ CULTURE

II. ACID FAST BACILLI
☐ SMEAR ☐ CULTURE

III. FUNGI
☐ SMEAR ☐ CULTURE

Specimen - (Source): Urine

(FOR LAB USE ONLY)

Report:
Micro - 6-10 WBC/HPF, scattered epith cells, few bacilli
Culture - more than 100,000 colonies/cc of Proteus Vulgaris

Date Done: 7/21/71

Done By: C.E.

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(sterile disodium carbenicillin)

A serious urinary tract infection...
Proteus vulgaris, confirmed by pure culture. Fortunately, the strain proves sensitive to carbenicillin and the patient is not allergic to penicillins. The choice is clear: Pyopen.

Unlike other antibiotics currently available for the treatment of Gram-negative sepsis, there are no reports of nephrotoxicity or ototoxicity with Pyopen therapy. Particularly valuable in urinary infections, because of its exceptionally high urine levels, its effectiveness against *Ps. aeruginosa* and *Proteus* species has been amply confirmed by clinical experience and microbiologic studies.

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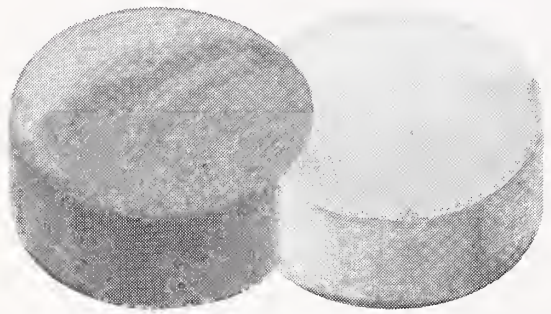
THE TOTAL SERVICE CONCEPT:
Beecham-Massengill's dedication to the concept of total service is exemplified by the Pyopen Program — offering valuable teaching-learning materials and an added measure of personal attention: *Gram-Negative Sepsis*, a multimedia presentation by leading American medical authorities...*A Profile of Pseudomonas*, a monograph for the clinical microbiologist... *24-hour consultation service* in matters relating to carbenicillin (phone: 201-778-9000)... *emergency supply*, a novel plan for assuring the continual availability of Pyopen to hospitals specifying this brand of carbenicillin.

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PRESCRIBING INFORMATION **Indications:** Primarily for treatment of infections due to susceptible strains of *Pseudomonas aeruginosa*, *Proteus* species (particularly indole-positive strains), and certain *Escherichia coli*. Clinical effectiveness has been demonstrated in the following infections when due to these organisms: Urinary tract infections; severe systemic infections and septicemia; acute and chronic respiratory infections (while clinical improvement has been shown, bacteriologic cures cannot be expected in patients with chronic respiratory disease and cystic fibrosis); soft tissue infections. Although PYOPEN (disodium carbenicillin) is indicated primarily in Gram-negative infections, its activity against Gram-positive organisms should be kept in mind when both Gram-positive and Gram-negative organisms are isolated (see Actions). **Note:** During therapy, sensitivity testing should be repeated frequently to detect the possible emergence of resistant organisms. **Actions:** Organisms found to be susceptible *in vitro* include: Gram-Negative Organisms-*Ps. aeruginosa*, *Proteus mirabilis*, *Pr. morganii*, *Pr. rettgeri*, *Pr. vulgaris*, *E. coli*, *Enterobacter* species, *Salmonella* species, *Hemophilus influenzae*, and *Neisseria* species. Gram-Positive Organisms-*Staphylococcus aureus* (nonpenicillinase-producing), *Staph. albus*, *Diplococcus pneumoniae*, Beta-hemolytic streptococci, and *Streptococcus faecalis*. Some newly emerging pathogenic strains of *Herellea*, *Mima*, *Citrobacter*, and *Serratia* have also shown *in vitro* susceptibility. Not stable in the presence of penicillinase. *Klebsiella* species are resistant. Some strains of *Pseudomonas* have developed resistance fairly rapidly. **Contraindications:** Known penicillin allergy. **Warnings:** Serious and occasional fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillin therapy. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens. There have been reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, appropriate therapy should be instituted and discontinuance of disodium carbenicillin therapy considered, unless the infection is life threatening and only amenable to disodium carbenicillin therapy. The usual agents (antihistamines, pressor amines, and corticosteroids) should be readily available. **Usage in Pregnancy:** Safety for use in pregnancy has not been established. **Precautions:** As with any other potent agent, it is advisable to check periodically for organ-system dysfunction, including renal, hepatic, and hematopoietic systems, during prolonged therapy. Emergence of resistant organisms, such as *Klebsiella* species and *Serratia* species, which may cause superinfection, should be kept in mind. Each gram contains 4.7 mEq sodium; in patients where sodium restriction is necessary, such as cardiac patients, periodic electrolyte determinations and monitoring of cardiac status should be made. Observe patients with renal impairment for bleeding manifestations and adhere strictly to dosage recommendations. If bleeding manifestations appear, discontinue antibiotic and institute appropriate therapy. As with any penicillin preparation, the possibility of an allergic response, including anaphylaxis, may occur, particularly in a hypersensitive individual. **Administration:** Intramuscular injections should be made well within the body of a relatively large muscle (not into the lower and mid-third of the upper arm), and aspiration is necessary to help avoid inadvertent injection into a blood vessel. May be given by either intravenous injection or intravenous infusion. After reconstitution with Sterile Water for Injection unused portions should be discarded after 24 hours if stored at room temperature, or after 72 hours if refrigerated. **Adverse Reactions:** *Hypersensitivity Reactions*—Skin rashes, eosinophilia, pruritus, urticaria, drug fever, and anaphylactic reactions. *Gastrointestinal Disturbances*—Nausea. *Hemic and Lymphatic Systems*—Hemolytic anemia, thrombocytopenia, leukopenia, neutropenia, in uremic patients receiving high doses (24 gm/day), hemorrhagic manifestations associated with abnormalities of coagulation tests, such as clotting and prothrombin time. *Hepatic and Renal Studies*—SGOT and SGPT elevations have been observed, particularly in children. To date, no clinical manifestations of renal disorders have been demonstrated. *Central Nervous System*—Convulsions or neuromuscular irritability could occur with excessively high serum levels. *Local Reactions*—Pain at the site of injection, sometimes accompanied by induration. Vein Irritation and Thrombophlebitis—particularly when undiluted solution is injected directly into the vein. **How Supplied:** Available in 1 Gm. and 5 Gm. vials.
Before prescribing or administering, see package circular or PDR.

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(sodium levothyroxine)

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No calculations are needed, test interpretation is simple.

Any of the commonly used T_4 thyroid function tests (P.B.I., T_4 By Column, Murphy-Pattee, Free Thyroxine) are useful in monitoring patients on T_4 because they *all* measure T_4. Patients on SYNTHROID are thereby easy to monitor because their results will fall within predictable, elevated test ranges. Of course, clinical assessment is the best criterion of the thyroid status of the drug-treated patient.

TEST	HYPOTHYROID	SYNTHROID THERAPEUTIC NORMAL
P.B.I.	Less than 4 mcg %	6-10 mcg %
T_4 By Column	Less than 3 mcg %	7-9 mcg %
T_3 (Resin)	Less than 25%	27-35%
T_3 (Red Cell)	Less than 11%	11.5-18%
Free Thyroxine	Less than 0.7 nanograms %	0.7-2.5 nanograms %
Murphy-Pattee	Less than 2.9 mcg %	4-11 mcg %

TWO GOOD REASONS WHY THE ROAD TO NORMALIZED THYROID STATUS IS SO SMOOTH FOR THE SYNTHROID PATIENT

(1) The onset of action of T_4 is gradual. It has a long in vivo "half-life" of over six days. (Occasional missed doses or accidental double-doses are of le concern because of this factor)[1] (2) since SYNTHROID contains or T_4, the potential for metabolic surges traceable to more potent iodides (T_3) is eliminated.



AS WITH ANY THYROID PREPARATION, CAUTIOUS OBSERVATION OF THE PATIENT DURING THE BEGINNING OF THERAPY WILL ALERT THE PHYSICIAN TO ANY UNTOWARD EFFECTS.

Side effects, when they do occur are related to excessive dosage. Caution should be exercised in administering the drug to patients with cardiovascular disease. Rea the accompanying prescribing information for additional data o write Flint Laboratories.

Choose the Smooth Road ...to thyroid replacement therapy





ATIENTS CAN BE UCCESSFULLY AINTAINED ON A RUG CONTAINING HYROXINE ALONE.

yroxine (T_4) is, as you know, major circulating hormone oduced by the thyroid gland. is also produced, in smaller ounts, and is active at the lular level. For years it has been orking hypothesis among docrinologists that T_4 is nverted by the body to T_3. In 0 this process, called iodination," was demonstrated Sterling and Braverman[2]. does convert to T_3, though the cise quantities are still being died.

he conversion has been ically demonstrated during the ninistration of T_4 to athyrotic ients. Their thyroid status is malized on SYNTHROID alone, the presence of T_3 in these ients has been clearly shown.

WHY DOES SYNTHROID COST LESS THAN SYNTHETIC DRUGS CONTAINING T_3?

Very simple. T_3 costs more to make synthetically than does T_4. So it is economically necessary for a synthetic thyroid medication containing T_3 to cost more than one containing T_4 alone. Synthetic combinations cost patients nearly 50% more than SYNTHROID[4] because the T_3 costs more to start with; also there is the additional expense of formulating a tablet containing two active ingredients.

1. Latiolais, C. J., and Berry, C. C.: Misuse of Prescription Medications by Outpatients, *Drug Intelligence & Clin. Pharm.* 3:270-7, 1969.
2. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine (T4) to Triiodothyronine (T3) in Athyreotic Human Subjects, *J. Clin. Invest.* 49:855-64, 1970.
3. American Druggist BLUEBOOK, March, 1971.

HE FACTS ARE EAR AND HERE OUR OFFER.

CTS:
thetic thyroid drugs are an rovement over animal gland ducts. Patients, even athyrotic s, can be completely ntained on SYNTHROID (T_4) ne. Thyroid function tests are y to interpret since they are *dictably* elevated when the ent adheres to SYNTHROID. all synthetic thyroid drugs, NTHROID is the most nomical to the patient.

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OFFER:
Free TAB-MINDER medication dispensers to start or convert all your hypothyroid patients to SYNTHROID. Free information to physicians on role of thyroid function tests in a new booklet titled: "Guideposts to Thyroid Therapy." Ask us.

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Indications: SYNTHROID (sodium levothyroxine) is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. Indications for SYNTHROID (sodium levothyroxine) **Tablets** include myxedema, hypothyroidism without myxedema, hypothyroidism in pregnancy, pediatric and geriatric hypothyroidism, hypopituitary hypothyroidism, simple (nontoxic) goiter, and reproductive disorders associated with hypothyroidism. SYNTHROID (sodium levothyroxine) **for Injection** is indicated for intravenous use in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. The injection is also indicated for intramuscular use in cases where the oral route is suspect or contraindicated due to existing conditions or to absorption defects, and when a rapid onset of effect is not desired.

Precautions: As with other thyroid preparations, an overdosage may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

Contraindications: Thyrotoxicosis, acute myocardial infarction. **Side effects:** The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they do occur, are secondary to increased rates of body metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.

In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.

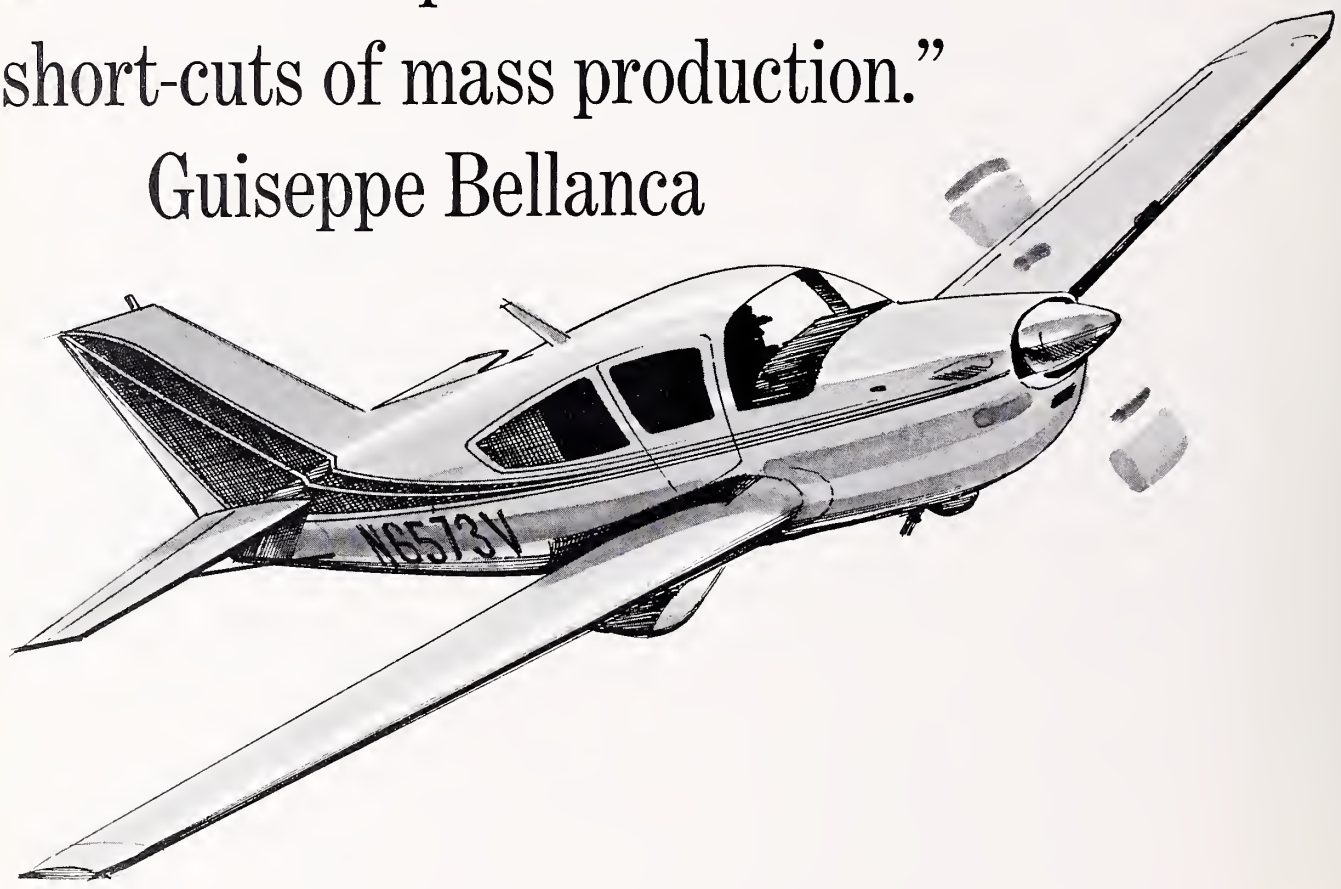
Dosage and Administration: The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose, preferably after breakfast. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) **for Injection** may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

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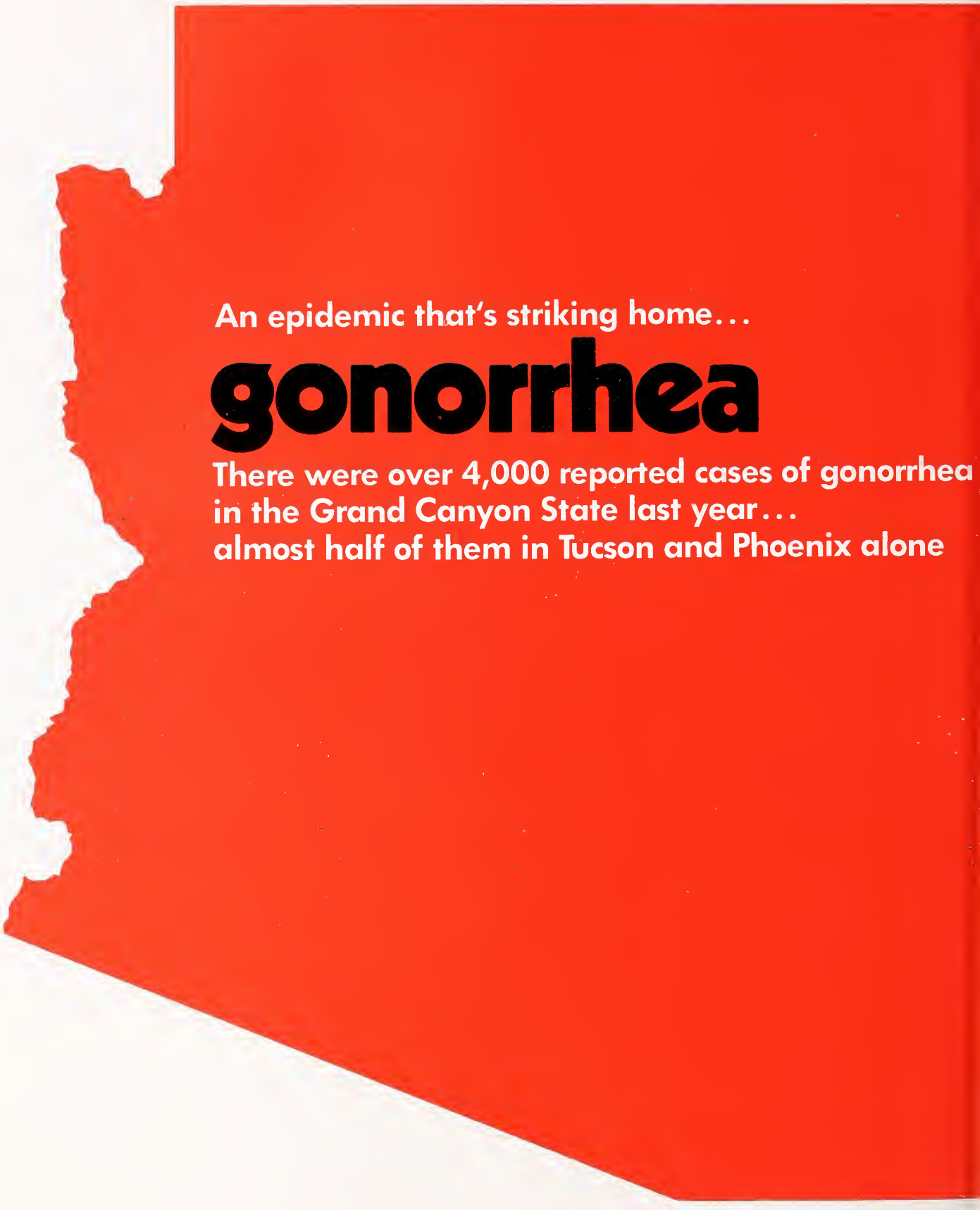
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McNEIL

Contraindications: Sensitivity to either component. ***Warnings:*** *Usage in Pregnancy*—Use in woman of child-bearing potential only when potential benefits outweigh possible risks. ***Precautions:*** Exercise caution in patients with known allergies or history of drug allergies. If a sensitivity reaction or signs or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. ***Adverse Reactions:*** Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely, allergic-type skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions. In rare instances, *Paraflex* (chlorzoxazone) may possibly have been associated with gastrointestinal bleeding. While *Paraflex* (chlorzoxazone) and chlorzoxazone-containing products have been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. ***Usual Adult Dosage:*** Two tablets q.i.d. ***Supplied:*** Scored, light green tablets, imprinted "McNEIL" —bottles of 100.

References: **1.** Batterman, R. C., and Grossman, A. J.: Fed. Proc. *14*:316, 1955. **2.** Goodman, L. S., and Gilman, A., ed.: The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970. **3.** Vickers, F. N.: Gastroint. Endosc. *14*:94, 1967. **4.** Mielke, C. H., Jr., and Britten, A. F. H.: New Engl. J. Med. *282*:1270, 1970 (Corresp.). **5.** Kestler, O. C., and Gyurik, J.: Industr. Med. Surg. *21*:372, 1962. **6.** Forster, S., et al.: Amer. J. Orthop. *2*:285, 1960. **7.** Data on file, McNeil Laboratories, Inc. **8.** Friend, D. G.: Clin. Pharmacol. Ther. *5*:871, 1964.

*U.S. PATENT NO. 2,895,877



An epidemic that's striking home...

gonorrhea

There were over 4,000 reported cases of gonorrhea in the Grand Canyon State last year... almost half of them in Tucson and Phoenix alone

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In Arizona... and everywhere else...
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NEW Trobicin® SPECTINOMYCIN DIHYDROCHLORIDE, PENTAHYDRATE, UPJOHN

single-dose treatment for intramuscular use only

a chemically distinct antibiotic indicated specifically for treatment of acute gonorrhea:
in the male–acute urethritis and proctitis
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when due to susceptible strains of *N. gonorrhoeae*

High cure rate:*96% of 571 males, 95% of 294 females
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Active against most strains of Neisseria gonorrhoeae *in vitro*
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A single two-gram injection produces peak serum concentrations averaging about 100 mcg/ml in one hour
(average serum concentrations of 15 mcg/ml present 8 hours after dosing)

NOTE: Antibiotics used in high doses for short periods of time to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Since the treatment of syphilis demands prolonged therapy with any effective antibiotic, and since Trobicin is not indicated in the treatment of syphilis, patients being treated for gonorrhea should be closely observed clinically. Monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected. Trobicin is contraindicated in patients previously found hypersensitive to it.

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*Data compiled from reports of 14 investigators.

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Trobicin and the gonorrhea challen

An accelerating epidemic— a decelerating susceptibility to penicillin

Gonorrhea is now the most prevalent reported communicable disease in the nation. The estimated number of new cases of gonorrhea in the United States exceeded two million for the first time in 1970. To compound the problems, strains of *N. gonorrhoeae* increasingly resistant to penicillin and other antibiotics are appearing throughout the country. Schedules of treatment which were effective only a few years ago now result in a significant percentage of treatment failure. *In vitro* studies have demonstrated that resistance of *N. gonorrhoeae* may also develop to Trobicin.

Thus, while aqueous Procaine Penicillin G remains the drug of choice for the majority of patients, the need for a non-penicillin, intramuscular antibiotic for acute gonorrhea in the male and female is abundantly clear. Such an antibiotic should be effective following a single intramuscular injection —and it should not demonstrate cross-resistance with penicillin

Trobicin—a new alternative specifically for the treatment of acute gonorrhea

Trobicin is indicated in the treatment of acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

High cure rates: 96% of 571 males, 95% of 294 females

Clinical Results with Single-Dose Treatment, Intramuscularly* (Data compiled from reports of 14 investigators**)

	Dosage	Number of Patients	Number Cured	Percent C
Adult Males: Gonorrheal urethritis	**2 grams** **4 grams**	**475** **96**	**457** **93**	**96%** **97%**
Adult Females: Gonorrheal cervicitis	**4 grams**	**294**	**280**	**95%**

Diagnosis was confirmed by cultural identification of *N. gonorrhoeae* on Thayer-Martin medium in all patients. Criteria for cure: negative culture after at least 2 days post-treatment in males and at least 7 days post-treatment in females. Any positive culture obtained post-treatment was considered evidence of treatment failure even though the follow-up period might have been less than the periods cited above under "criteria for cure" except when the investigator determined that reinfection through additional sexual contacts was likely. Such cases were judged to be reinfections rather than relapses or failures. These cases were regarded as non-evaluatable and were not included in the table above.

No allergic reactions occurred in patients wh alleged history of penicillin hypersensitivity w treated with Trobicin, although penicillin an studies were not performed.

Chemically distinct

Trobicin is structurally not related to any other a commonly used to treat gonorrhea.

The assurance of a single-dose, physician-controlled treatment schedule

Intramuscular injections should be made deep into the outer quadrant of the gluteal muscle.

Adult male: Single 2 gram dose I.M. in acute gon urethritis. Single 4 gram dose I.M. (should be divided b two gluteal injection sites) in gonorrheal proctitis patients being re-treated after failure of previous a therapy. In geographic areas where antibiotic resist known to be prevalent, initial treatment with 4 gram muscularly is preferred.

Adult female: Single 4 gram dose I.M. (should be divid tween two gluteal injection sites) in acute gonorrhe vicitis and proctitis.

Safety for use in pregnancy has not been established, safety for use in infants and children.

The following reactions were observed during the dose clinical trials: soreness at the injection site, u dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in human volunteers, the following were noted: a decr hemoglobin, hematocrit and creatinine clearance; el of alkaline phosphatase, BUN and SGPT. In single a tiple-dose studies in normal volunteers, a reduction output was noted. Extensive renal function studies strated no consistent changes indicative of renal toxici

*4-gram doses were injected in two gluteal sites.

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a chemically distinct antibiotic indicated specifically for treatment of acute gonorrheal urethritis and proctitis in males and cervicitis and proctitis in females when due to susceptible strains of *N. gonorrhoeae*

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als containing 5 ml when reconsti-ith diluent. 4 gm vials containing hen reconstituted with diluent.

nocyclitol antibiotic active *in vitro* most strains of *Neisseria gonor-* (MIC 7.5 to 20 mcg/ml). Defini-*vitro* studies have shown no cross nce of *N. gonorrhoeae* between n and penicillin.

tions: Acute gonorrheal urethri-proctitis in the male and acute heal cervicitis and proctitis in the when due to susceptible strains *onorrhoeae*.

indications: Contraindicated in s previously found hypersensitive icin. Not indicated for the treat-syphilis.

ngs: Antibiotics used to treat gon- may mask or delay the symp-f incubating syphilis. Patients be carefully examined and serological follow-up for at least s should be instituted if the diag-syphilis is suspected.

for use in infants, children and nt women has not been estab-

Precautions: The usual precautions should be observed with atopic individuals. Clinical effectiveness should be monitored to detect evidence of development of resistance of *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25°C and use within 24 hours after reconstitution with diluent.

Male—single 2 gram dose (5 ml) intramuscularly. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.

Female— single 4 gram dose (10 ml) intramuscularly.

How supplied: *Vials, 2 and 4 grams —with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9%* w/v. Reconstitution yields 5 and 10 ml respectively with a concentration of spectinomycin dihydrochloride pentahydrate equivalent to 400 mg spectinomycin per ml. For intramuscular use only.

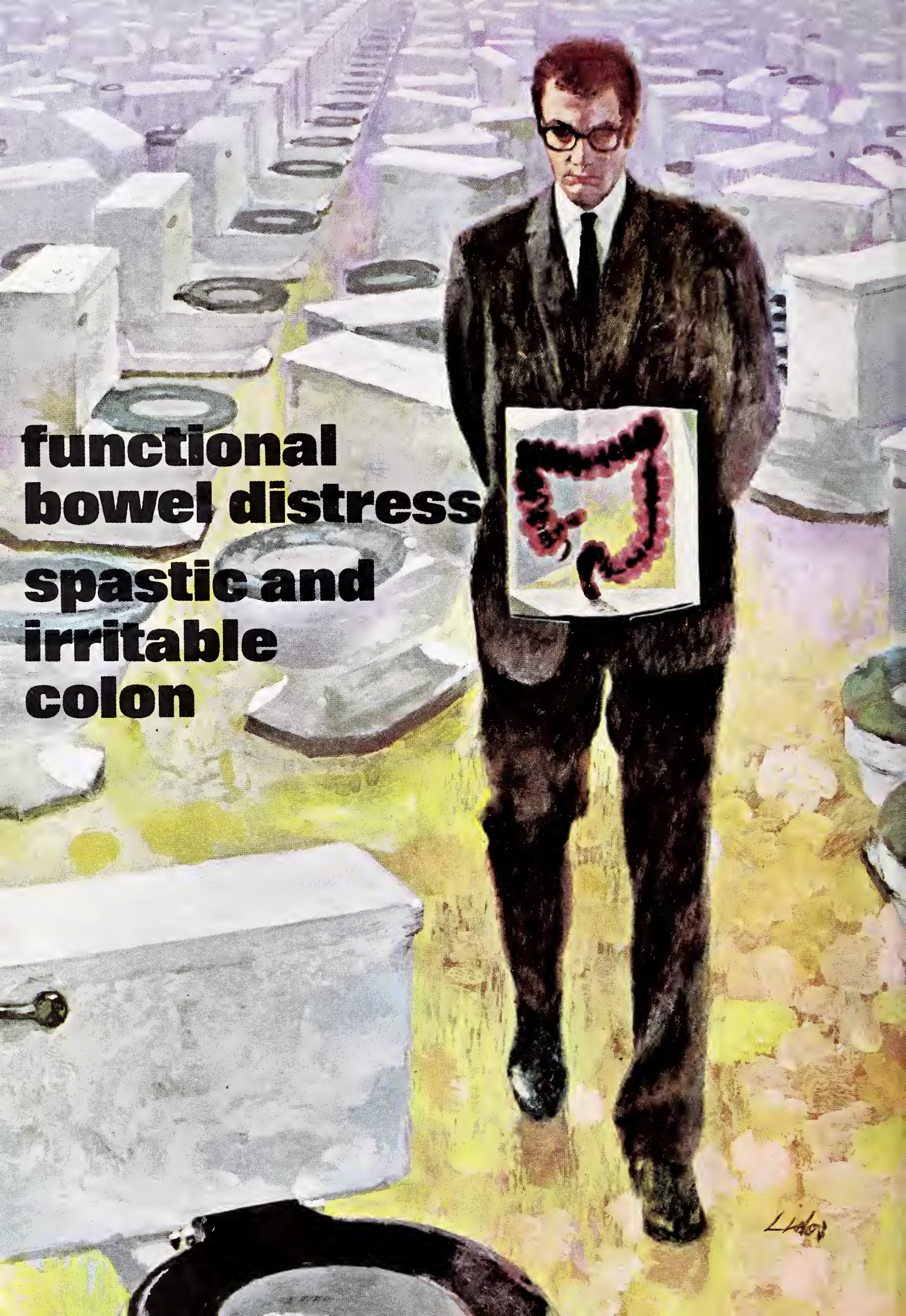
Susceptibility Powder—for testing *in vitro* susceptibility of *N. gonorrhoeae*.

Human pharmacology: Rapidly absorbed after intramuscular injection. A two-gram injection produces peak serum concentrations averaging about 100 mcg/ml at one hour with 15 mcg/ml at 8 hours. A four-gram injection produces peak serum concentrations averaging 160 mcg/ml at two hours with 31 mcg/ml at 8 hours.

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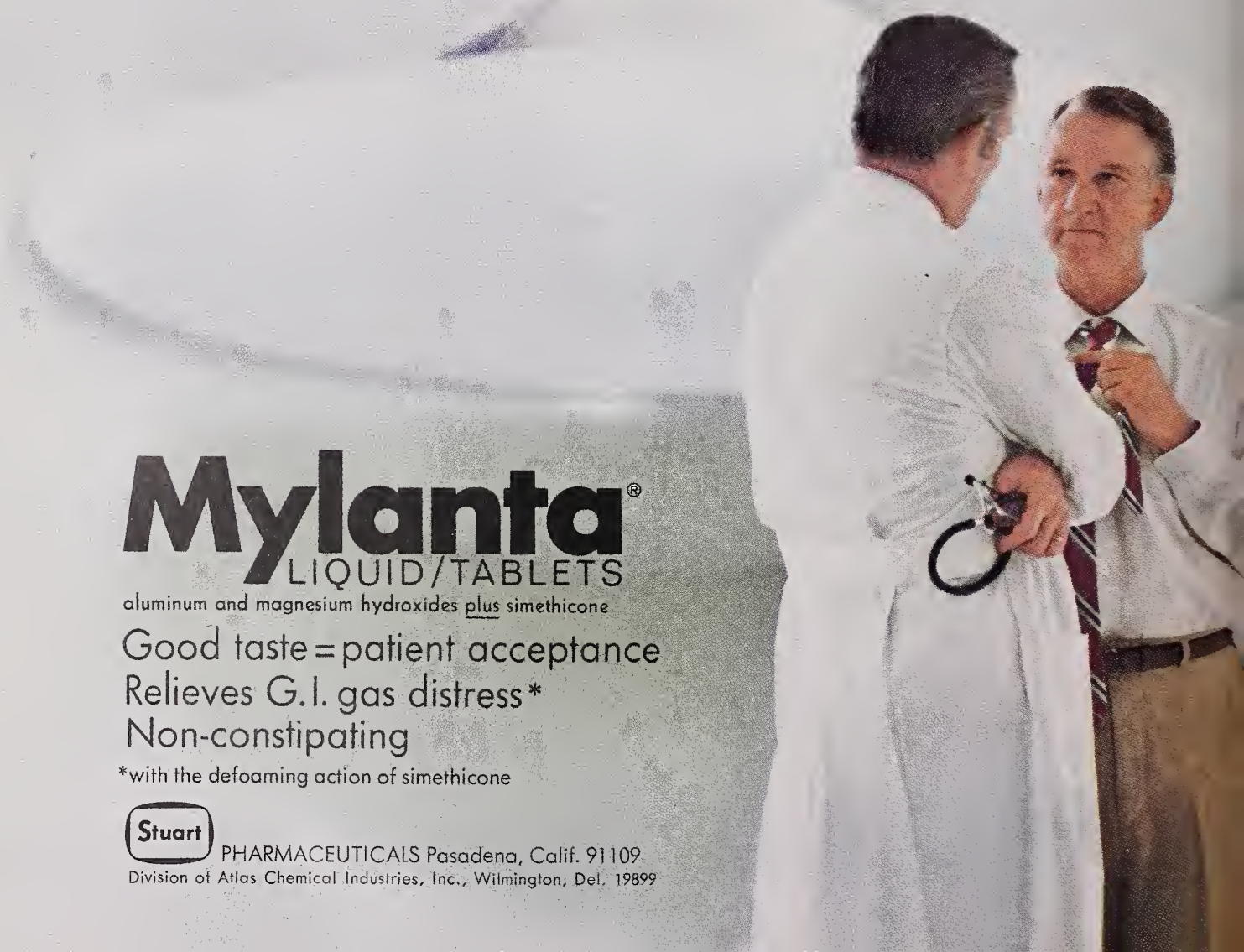
Robinul® 2mg. Forte (glycopyrrolate)

■ **INDICATIONS** Robinul Forte (glycopyrrolate, 2 mg.) and Robinul-PH Forte are double-strength dosage forms of glycopyrrolate. They are primarily indicated for patients who are less responsive to anticholinergic therapy and for control of the more prominent symptomatology associated with acute episodes of gastrointestinal disorders. Emphasis should be on total management, with due consideration of the various therapeutic modalities available, including diet, antacids, anticholinergic agents, sedatives, and attention to emotional problems. Accordingly, glycopyrrolate is recommended in the management of gastrointestinal disorders amenable to anticholinergic therapy, such as: (1) duodenal ulcer, duodenitis, pylorospasm; (2) gastric ulcer, gastritis, esophageal hiatal hernia, hyperchlorhydria, pyrosis, aerophagia, gastroenteritis; (3) esophagitis; (4) cholecystitis, chronic pancreatitis; (5) spastic and irritable colon, ulcerative colitis, functional bowel distress, diverticulitis, acute enteritis, diarrhea; and (6) splenic flexure syndrome, neurogenic gastrointestinal disturbances. When these conditions are associated with psychic overlay, the formulation with phenobarbital may be indicated. ■ **CONTRAINDICATIONS** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte (glycopyrrolate with phenobarbital), sensitivity to phenobarbital. ■ **PRECAUTIONS** Administer with caution in the presence of incipient glaucoma. ■ **SIDE EFFECTS** The most frequent side effect noted during clinical trials was dry mouth. Thirty-three (3.3%) of 1,009 patients receiving 1 to 32 mg. of glycopyrrolate a day complained of dry mouth of moderate to severe degree, but only 11 discontinued treatment because of this. Blurred vision, constipation, and urinary hesitancy have been reported infrequently. Other side effects associated with the use of anticholinergic drugs include: tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash. ■ **DOSAGE** The average and maximum recommended dose of Robinul Forte (glycopyrrolate, 2 mg.) or Robinul-PH Forte is one tablet three times daily (in the morning, early afternoon, and at bedtime). To obtain optimum results, dosage should be adjusted to the individual patient's response. After the more severe symptoms associated with acute conditions have subsided, the dose may be reduced to the minimum required to maintain symptomatic relief. ■ **SUPPLY** Robinul Forte (glycopyrrolate, 2 mg.) is available as scored, compressed pink tablets engraved AHR/2 in bottles of 100 and 500. ■ Robinul-PH Forte (glycopyrrolate, 2 mg., with phenobarbital, 16.2 mg.) is available as scored, compressed blue tablets engraved AHR/2 in bottles of 100 and 500.

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LEFT ANTERIOR DESCENDING CORONARY PULMONARY ARTERY FISTULA

A. Benchimol, M.D.
Kenneth B. Desser, M.D.
Stephen Tio, M.D.

Cardiac catheterization and selective cineangiography allow accurate anatomic localization and physiologic evaluation of many lesions which produce precordial murmurs in the absence of electrocardiographic abnormality. They are particular valuable diagnostically when the murmur is continuous throughout the cardiac cycle, and surgical correction is contemplated. In the case described below, a rare fistulous communication between the left anterior descending coronary artery and the pulmonary artery was identified as the cause of a continuous murmur in a 41-year-old female. In the absence of physiologic abnormality, surgery was not recommended.

Continuous precordial murmurs may be caused by numerous cardiovascular disorders. Localization of the source of a murmur of this type is of practical importance, since most of the etiologic abnormalities are amenable to surgical correction.[1] Unusual causes of these continuous murmurs include coronary artery fistulas and specifically left coronary artery-pulmonary artery communications.

The purpose of this report is to describe a case of left anterior descending coronary artery main pulmonary artery fistula in a 41-year-old woman.

From the Institute for Cardiovascular Disease, Good Samaritan Hospital, 1033 E. McDowell Road, Phoenix, AZ 85006.
Supported in Part by the Nichols' Memorial Fund.
For Reprints contact Dr. Benchimol at the above address.

CASE REPORT

B. J. M. (GSH #136-257), a 41-year-old woman, was admitted to the Good Samaritan Hospital for investigation of a cardiac murmur. Two months prior to admission, the patient experienced the onset of retrosternal chest pain radiating to the left side of the neck, preceded by cough. The pain, occurring at rest, was not initiated or aggravated by exercise and lasted 30 seconds in duration. There was no history of dyspnea, orthopnea, edema, hemoptysis, cyanosis or exercise intolerance. Past history was entirely negative except for removal of an ovarian cyst and appendectomy. The entire physical examination was normal except for the abdominal scars of previous surgery and auscultation of the precordium. On auscultation at the pulmonic and tricuspid areas, there was a grade II/VI ejection systolic murmur followed by a low pitched decrescendo diastolic murmur. These murmurs were continuous throughout the cardiac cycle. The first and second heart sounds were normal. A phonocardiogram confirmed these findings (Figure 1). There were no thrills, rubs or heaves. A 12 lead scalar electrocardiogram and Frank vectorcardiogram were within normal limits. A P-A chest roentgenogram revealed bilateral hilar vascular fullness, especially on the left. Results of a complete blood count, urinalysis, serologic test for syphilis, serum glucose, urea nitrogen, total protein, cholesterol, uric acid, alkaline phosphatase, phosphorus, bilirubin, LDH and SGOT were normal. A complete right and left heart catheterization revealed normal cardiac pressures and function. Selective coronary cineangiography showed no evidence of atherosclerosis. There was, however, a fistulous tract communicating between the proximal left anterior descending coronary artery and main pulmonary artery (Figure 2). The fistula arose from a single trunk and then branched into numerous vascular channels which led to the pulmonary artery. The patient was discharged and has been asymptomatic.

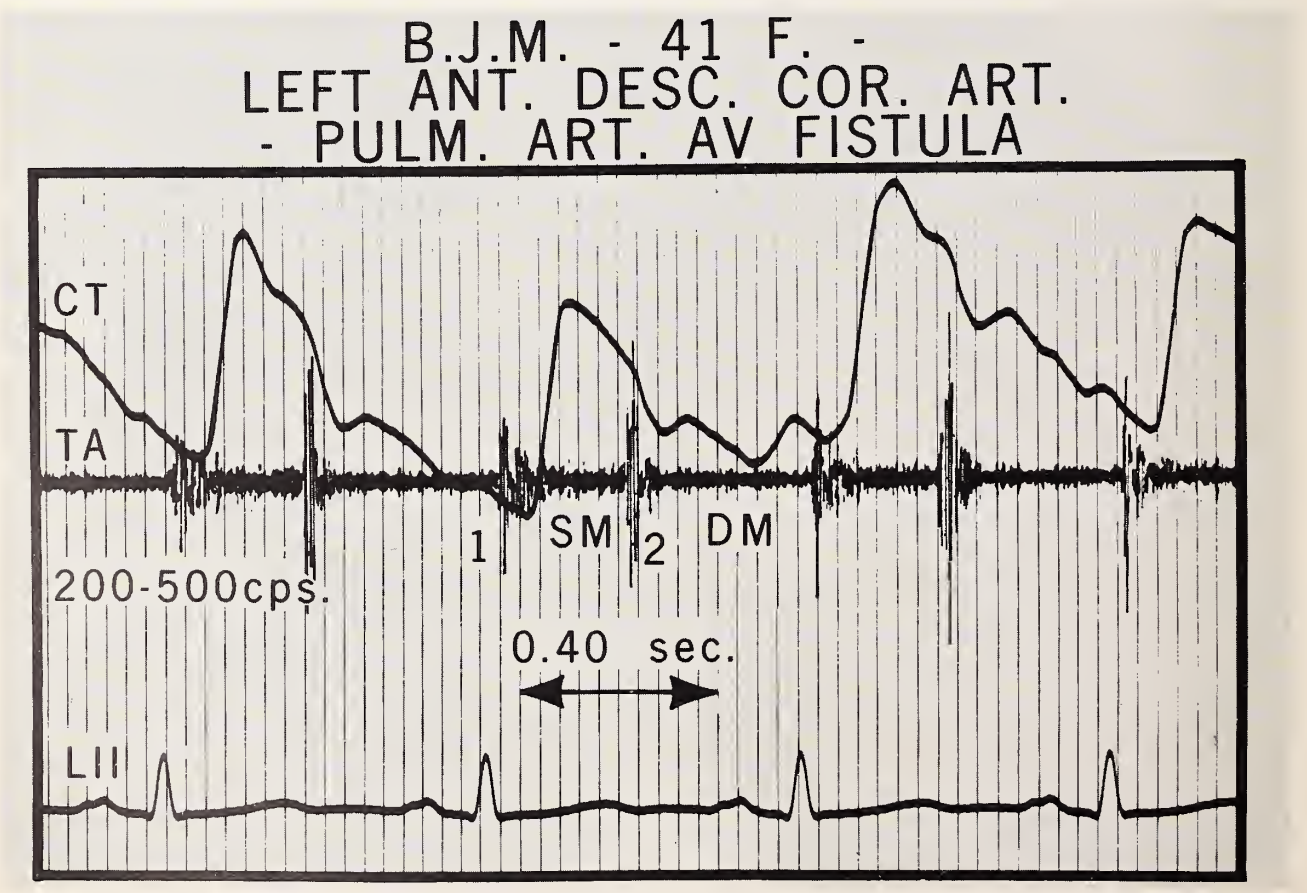


Figure 1
Carotid pulse tracing (CT), tricuspid area phonocardiogram (TA) and lead II of the electrocardiogram (L II) recorded from the patient. Note the continuous murmur with a sytolic (SM) and diastolic (DM) component.

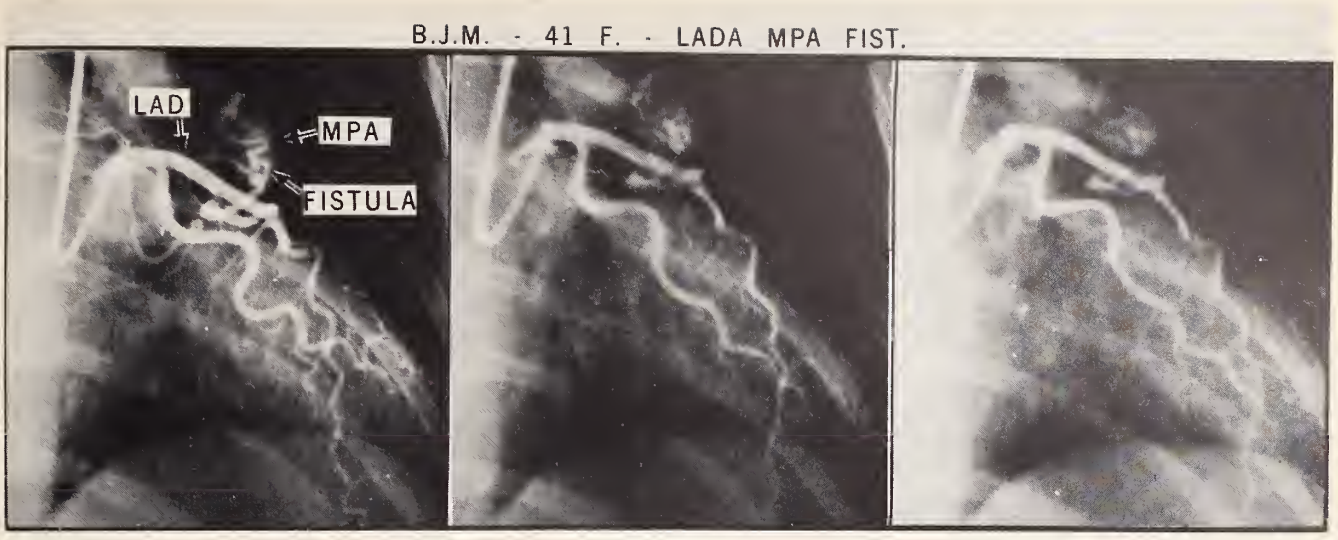


Figure 2
Selective cineangiograms obtained with the patient in a right anterior oblique position. Note the abnormal communication between the left anterior descending coronary artery (LAD) and main pulmonary artery (MPA). Also note the multiple vascular channels which connect these two arteries.

DISCUSSION

Left anterior descending coronary artery-pulmonary artery communications are unusual and rare anomalies. In an 8-year experience with more than 6,000 selective coronary arteriographic studies at the Cleveland Clinic,[2] only 15 coronary artery arteriovenous fistulae were diagnosed. Only three of these fistulae were between the left anterior descending coronary artery and pulmonary artery.[2] The more common coronary artery-cardiac chamber fistulas result from persistence of the embryonic myocardial trabeculae, which usually develop into sinusoids. In contrast, coronary artery-pulmonary artery communications are thought to represent abnormal origin of a coronary artery from the pulmonary trunk. The accessory artery communicates with branches of the normal coronary artery.[3] Flow goes from the high pressure aortic area to the low pressure pulmonary artery.

Electrocardiograms and plain chest roentgenograms are usually no aid in diagnosis, although left ventricular hypertrophy or increased pulmonary vascularity may be present.[4] The definitive diagnosis rests with the performance of coronary arteriography[2] or aortography.[3] Possible complications of this entity similar to other coronary fistulae, include aneurysm formation,[5] cardiac failure, bacterial endocarditis, endarteritis, anemia, glomerulonephritis and angina pectoris.[6, 7] Although our patient's chest pain was atypical, it is conceivable that increased shunting of left anterior descending coronary blood to the pulmonary artery occurred during paroxysms of coughing with resulting angina. A "coronary steal" phenomenon in patients with associated coronary artery disease has also been described.[2]

Selection of cases for surgery should be dependent on the volume of shunt, symptoms and electrocardiographic changes.[8] If the only symptom or sign is a murmur, surgical treatment is unnecessary.[9] Although some have advocated correction even in asymptomatic patients,[4] myocardial infarction, either at surgery or during the post-operative period has been reported.[6]

Our patient will be observed closely for any possible complications, but operative intervention was not indicated at this time. Antibiotic prophylaxis to prevent bacterial endocarditis will be administered prior to any dental or surgical procedure. Since the natural history of this rare entity is unknown, repeat coronary artery angiography may be performed at a future date. The occurrence of asymptomatic coronary artery disease may be an indication for surgical correction in patients with this disease.

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HAZARDS OF LAPAROSCOPY

MARTIN COHEN, M.D.

In any diagnostic or therapeutic modality in medicine, imperfect results and, at times, untoward results occur. Laparoscopy is a diagnostic and therapeutic modality is increasing in use throughout the United States at the present time. It is well that some of the problems related to this relatively new technique are discussed in he present paper.

In recent years the resurgence of laparoscopy as an adjunct in gynecological diagnosis and as a method of tubal sterilization has apparently taken the country by storm. It seems that all laparoscopists have a semi-missionary zeal and are anxious to both impress others as to the usefulness of this modality and/or to teach the technique.

I find myself in the same situation; however three circumstances have arisen which ordinarily one would like to forget about and hide, but for some reason I feel impelled to write about if only to point out that laparoscopy is not as innocuous a procedure as say a vena puncture.

For many years I have felt the necessity to implement our usual diagnostic tools by endoscopic methods and have been utilizing the culdescope with good results. While I still feel that there is a place for culdoscopy by and large my endoscopic techniques have tended more and more towards the use of the laparoscope. There is no question that diagnostic acumen is enhanced with this instrument and that hospitalization can be dramatically shortened in the case of tubal sterilization. There is also no question that numerous laparatomies have been avoided, in my case three in a one-week span. However, I wonder if the complication rate is sufficiently described. One of course hates to feel that the problems I am about to describe are completely unique and a result of faulty techniques, but be that as it may, complicating factors do exist and should be brought to the attention of those utilizing this technique.

Case #1

Mrs. M. W. This young woman gave a perfect history for endometriosis and was admitted for diagnostic laparoscopy with an eye towards perhaps fulguration of implants and division of some minor intra-pelvic adhesions.

It is of note that she is extremely thin and weighs approximately 98 lbs. Anesthesia was accomplished by intubation, pentothal N_2o, O_2 and fluothane administered by an expert anestheosologist. After introduction of the verres cannula and insufflation of about 200cc of CO_2 she suddenly became pulseless and her blood pressure dropped to zero. The procedure was immediately terminated and closed chest cardiac massage was initiated and she responded well. Her arrest was of brief duration and she recovered uneventfully. Whether the insufflating medium (CO_2) had been directly introduced into a large pelvic vessel or the arrest was anesthetic in background will never be determined, but as a result of this I routinely use Syringe Aspiration technique prior to commencing the insufflation.

Case #2

Mrs. B. W. This woman was admitted for laparascopic tubal sterilization. After grasping one of the fallopian tubes with the Palmer tong it was found that the cutting unit for some reason did not work. Coagulation was applied and the usual manipulative motions carried out to remove a portion of the tubes for pathological exam. It was noted at this point the bleeding was excessive and immediate laparatomy was done ligating a vessel in the mesosalpinx which was bleeding profusely.

Case #3

This was a 290-pound Indian woman admitted for laparscopic tubal sterilization. It was difficult to manipulate the uterus and either with the probe or the sharp end of the biopsy tong the left illac vein was torn. Immediate laparatomy was done with no untoward sequela.

SUMMARY

Out of other people's unfortunate circumstances we learn. This is true for medicine in general and in this case laparoscopy in particular I feel that several points have been made in these three cases which I hope will avoid repetition in the future.

A) Aspiration prior to insufflation
B) Grasping tubes at relatively vascular areas
C) Extreme care in manipulation remember – that the end of the Eder biopsy tong is sharp

Family Practice Reports

Preceptor's Experience

MY MEDICAL STUDENT

GEORGE W. KING, M.D.
Tucson, Arizona

It was with some apprehension that I learned that a young woman first-year medical student desired to spend part of her summer's vacation in my office as observer. I feared that a bright young student with his endless inquiries, his sharp keen mind and up to date training would hopelessly out date me as an old practitioner at worst and lengthen my working day at least. My student's excellent recommendations and impecable letter of self-introduction helped me decide in her favor and so, on the first of June I found my medical student, dressed in a neat white uniform facing me in the office.

My student was a remarkable young lady, who after working half a day at the Medical School's Microbiology Laboratory would arrive trim and efficient at the office. She would see with me an office-full of patients, scrub in on an afternoon surgery, then get up that night to help deliver a baby. Identification of this extra person the examining room was sometimes difficult for the patient. Sometimes he would assume she was another new nurse or sometimes he would become suspicious and I would proudly introduce her as a future doctor. On one occasion, just for fun, I refused to give any explanation at all of her identity to a particularly curious patient who could hardly bear the suspense. By our matter-of-fact attitude we both indicated that she simply belonged. It was in this setting that we evolved the time-saving technique of total involvement of the doctor-student-patient in a mutual learning experience.

The system worked something like this. Addressing the patient and my student alternatingly in the setting of the examining room, it soon became apparent that I was speaking to them both as one person and expected from each an answer. Thus, a question to the patient as to what complaints he might have would be re-addressed to the student as to what complaints might a patient have with the known or suspected condition under consideration. With this brief introduction, the roles might be reversed, with the patient being asked to tell us from his own knowledge, what complaints one might expect from a patient not necessarily himself with the known or suspected condition. From this position it was quite easy to ask both patient and student to speculate upon what disease might conceivably cause the patient's thus elicited set of symptoms. Now we found that the feared list of diseases brought by the patient had become a logical didactic exercise, handled nicely by the newly confident member of the team, the patient. Time was saved in imparting information to the student and patient.

Now a treatment plan was agreed upon by all three of us, and many times a laboratory test completed, such as with the taking of an X-ray to see whether the three of us were right or wrong. Medical terminology was kept at a minimum, but whenever it was necessary the term was defined for both students, i.e., my medical student and my patient who by now had accepted his role of student. He felt that he was indeed learning and outside in the hallway might remark to the nurse, "Doctor King never told me so much before."

Physical examinations were prompt, brief, and pertinent to the problem at hand, with all three of us involved in such procedures as palpating a pulsatile aortic aneurysm, auscultating a fetal heart beat or a carotid bruit, and all three of us speculating on the significance of the findings. My student and my matter-of-fact attitude all but eliminated any embarrassment of any patient.

I felt that my student should not be spared the painful part of Family Practice, such as the bookkeeping problems, the in-coming bills and expenses, and even the blistering impeachment of her doctor by an irate patient. She became quite aware of the mounting paperwork load forced on the doctor nowadays.

I feel that our method, that of total inclusion of the student, the patient, and the doctor as one person may be of interest to other doctors of medicine and may stimulate them to accept medical students and thus reap the many rewards of their investment.

I am grateful to "my medical student" for bringing to a slightly jaded medical practice new freshness, one like I remember when I started out so many years ago.

Family Practice Reports

Medical Student's Experience

MY FAMILY DOCTOR

MISS JANE ORIENT
Medical Student at Columbia University
College of Physicians and Surgeons, New York

In my first year of medical school at Columbia, the LMD was mentioned a few times in the CPC, but this is as close as the entire curriculum comes to the physician in private practice. This summer I wanted to see the problems that come to the family doctor, the resources with which he has to work, and how he copes with the 15 hospital patients, 43 office patients, 36 phone calls, and the stack of forms he meets on an average day. Dr. King gave me the privilege of, "following him around." I sat in on office calls, hospital visits, and consultations with the radiologist, and scrubbed for surgery and deliveries. Besides giving me a taste of the realities of Family Medicine, it was my first introduction to clinical medicine and physical diagnosis. Thus it was a kind of experiment in apprenticeship as a method of education.

The very first patient I saw had one of the diseases not included in the Pathology Course, which at least mentioned 99% of the diseases afflicting man. It was one of the two cases of pitryriasis rosea we saw during the summer. The patient didn't seem to mind showing her spots to a medical student; in fact she was pleased with the rather complete lecture she received on the presentation, course, etiology, and treatment of her exotic sounding condition. She was also cooperative in giving me a lesson in genetics, describing the family history of an incidental finding.

Dr. King's patients underwent about fourteen different kinds of surgery during the summer. The first was a sigmoid resection, at which Dr. King was to assist and I was to observe. While we were waiting for this, I got to hold my first retractor in a most unexpected way. Another surgeon was trying to save four partly amputated fingers of a mangled right hand, and corralled us to help until his regular assistant could arrive. It was my first sight of an automobile accident victim and my first lesson in sterile technique, all-in-one. The latter I learned mainly by imitation and from the Operating Room nurses who watched my every move. (I did all right except I had to have a second sterile if somewhat bloody towel clamped to my gown for protection). The scene was utterly macabre in the contrast between the horror of the event and everybody's reaction. The patient was in pain, shock, and fear, yet the doctors had an amused and slightly gruesome interest in whether the medical student was going to faint. What would have been a suspenseful drama to a layman was routine to them. In fact, the Operating Room looked so much like an ordinary room that I didn't realize where I was at first.

Excitement seemed to happen all at once. The sigmoid resection was finished at 11 p.m. and the baby came at 5 a.m. The previous night, the center of attention had been the technology, anatomy and the surgeon's skill. Now these were mere props to help along the natural process of birth. It was truly a spectacular sight, the giving of birth, and I am glad I had a chance to witness it once afresh, before having to think too much about the bookish details of the Obstetrical course to be learned. This was one of the two normal deliveries I observed. The third was a brow presentation, a lesson in appreciating modern facilities and the availability of specialists. The obstetrician demonstrated a forceps delivery that isn't even discussed in the textbook.

From the first minor surgery I did all by myself (sewing up a cut finger), I learned that one doesn't learn how to suture by watching. I also discovered a lot of wrong ways to try to tie a knot. Even Dr. King didn't know there were so many. He sent me home with a needle holder and suture. Later one of the surgeons came to my rescue with a book on hand ties having step-by-step pictures, and I decorated all of the water faucets during my spare moments at my part-time research job. I simply could not learn

that technique from simply being shown. The patient's reaction to the suturing was surprising. She was too upset to watch and just assumed the doctor was doing everything important whereas he was really only explaining what I was doing. She ignored me almost completely though I was obviously the only one wearing sterile gloves. The second man I sutured was an old patient and a very nice man; he knew I was a medical student but didn't seem to mind and he didn't pay any attention to whom was cutting off his "moles."

Just how the patients would react to having me in the room while they were being examined was a question for both of us. Some assumed that I was a nurse and my presence was a standard procedure. Sometimes Dr. King introduced me as a medical student; sometimes he said nothing; and sometimes he just discussed the case with me or asked my opinion on a physical finding, explaining only if asked. Very few objected to being "guinea pigs;" some were very kind and cooperative, letting me take my time to look in their fundi or worse, at their vocal chords. Two patients enjoyed showing off their Pacemaker or Starling valve scars. A couple of old ladies with volumes to say about their symptoms would talk to me without interruption when the doctor was called to the phone and continue when he returned as if there hadn't been any change in their listener. There were some delicate situations I had to stay clear of; perhaps I should get a gray wig and more wrinkles to alleviate an occasional male patient's private embarrassment. Dr. King would simply wave me away from these situations.

One of the difficult diagnostic problems we encountered was a delightful lady with an intractable pleural effusion. She allowed me to practice finding it by percussion. Draining it didn't help for long, she became progressively weaker, and was then referred for a thoracoscopy and biopsy. I had a quick glimpse of what looked like a tumor mass through the surgeon's thoracoscope. My useful function here may have been in reassuring her that she had all her ribs intact even though it felt as if we were taking away a couple. I was really relieved when the report came back, "healing granuloma," despite the gross appearance of cancer.

Amid the routine succession of strep throats and "infectious mono," a surprising number of rare and interesting (i.e. "bad") diseases came in. We felt an expansile pulsating abdominal mass on a routine examination, and a few minutes later saw the films confirming the diagnosis of aortic aneurysm, which had been completely asymptomatic. The surgery revealed such pathology that I could hardly believe she was alive, but five days after the ordeal, this seventy-year-old lady was as alert as when I first saw her and was complaining that she wasn't allowed out of bed more. Her case also gave me some insight into the doctor's responsibilities beyond putting the patient in the hospital and cutting out the lesion. The social problems in this case, the care of a sick and demanding husband during her recovery, can be just as difficult.

Many of the doctors to whom I wrote asking to work with them for the summer replied that in private practice it was unthinkable that a medical student could do or learn much. Though there are certainly limitations on what he can do, the summer brought me an incomparably rich variety of experiences which could not be obtained in any other way. There were many examinations I could perform which were neither painful nor potentially harmful and which were quite useful, such as listening to bruits and palpating livers. I saw many graphic illustrations of what were previously abstractions from physiology class such as tetany due to hyperventilation, or what seemed like fiction from psychiatry, such as conversion hysteria. I observed the doctor's approach to many different patients. I followed and tried to anticipate his diagnostic reasoning. I was introduced to some of the business considerations in running an office such as insurance and collection agencies. Many social problems arose: when should an old man be sent to a nursing home, would it be better for grandfather to die at home or should he go to the hospital, and what should the doctor recommend about this delinquent and possibly battered child going to a foster home. I had a chance to consider legal and ethical problems not part of the regular curriculum: what X-rays have to be ordered for legal reasons, should risky arterial surgery be recommended for this patient, and should Pasteur treatments be given in a doubtful case.

I am greatly indebted to Dr. King, his nurse and the other doctors who taught me. I hope more medical students will have similar opportunities in the future.

VALUES, CONCEPTS, CHANGES, AND EFFECTS

Dr. John S. Millis, president of the National Fund for Medical Education and Chancellor Emeritus of Case Western Reserve University in recent reports has recommended sweeping changes in the country's "60-year-old system of training physicians." He has also stated that "we have not educated and trained physicians, nurses, dentists, and all other health professionals in sufficient numbers, quality or diversity to deliver the services we have guaranteed our people." Dr. Millis emphasizes that 1) there are too many specialists and too few family physicians, 2) there is an urgency to train a new breed of "healer-teacher" who can teach people how to stay well rather than just to treat those who get sick, and 3) doctors must be committed to reducing the incidence of alcoholism, cigarette-induced cancer, drug abuse, obesity, automobile accidents and other wide-spread socio-medical problems. Although some of these value judgments and concepts are valid, others are not and do not recognize continuing medical achievements or patterns of practice not the responsibilities of others segments of society.

Writing recently in SATURDAY REVIEW, NEW YORK TIMES editor Harry Schwartz in a rather lengthy article concludes that, based on the record of the past, "we have every reason to suspect that if the revolutionary proposals for transforming American medicine are adopted and implemented, medical care in this country will cost more while providing less satisfaction and poorer treatment for millions." He notes that, whatever the medical establishment's sins, it is not responsible for hunger in this country, for the autos that kill 50,000 people annually, for the drug overdoses that claim thousands of young lives, or for the millions of Americans who court heart disease and lung cancer by overeating, exercising little or not at all, and smoking a pack or more of cigarettes daily.

The pressures to totally reorganize the nation's medical system have never before been so intense. However, medical leadership and all physicians can take pride in remarkable progress that is continuing to take place in medicine, should not be thrown off balance by the barrage to scuttle and change, and must continue their efforts in behalf of the public interest. Both Dr. Millis and Mr. Schwartz present excellent arguments which may be misinterpreted as too radical or too complacent. The basic issue is for physicians to continue to participate in the changing scene and to assist in the kind of progress that will advance medical arts, sciences and delivery of care for the benefit of society.

John R. Green, M.D.

Editor's Page

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President's Page

CODAC



James L. Grobe, M.D.
President

There are many good causes, worthwhile organizations and outstanding citizens who give of their time, money and talents to aid our community in what seems her endless quest for improvement.

In fact, sometimes it seems there are so many "good causes" our charity becomes strained. To be more realistic, our charity gets turned off from sheer confusion and what appears to be duplication of effort.

But as with many men, organizations and causes, there are exceptions for which most of us have and will continue to walk that extra mile or give an extra dollar. The Community Organization for Drug Abuse Control, in the opinion of a majority of us, has demonstrated that it merits that extra effort, that extra dollar.

CODAC's campaign to raise $300,000 has fallen short of the goal. The news media has generously reported results of all CODAC fund-raising activities from the telethon to the Letter Carriers March to the high school students 10-Speed Ride for CODAC which netted $2,728.17.

There have been other efforts, some more ambitious and some more modest in results. All efforts, however, were sincere. Every dollar helps.

CODAC's reputation for successfully bringing together facilities funds, manpower and know how is national.

Last February in Phoenix before the Young Republican Trunk 'N Tusk Club, United States Attorney General John N. Mitchell said: "I find it extremely exhilarating the way Phoenix has led other cities in its attack on the drug problem. This program (CODAC) has been conceived and executed by Phoenix people and, as a result, in 1970, the rate of drug cases declined for the first time in years."

Yes, there are many good causes. CODAC is one. CODAC also is one which deserves that extra effort from the community. We in the medical profession are a vital part of this community. I urge you to do your part by giving generously to CODAC. The urgency is here, the cause is here, all it needs is your help.

In addition to its own administrative cost, CODAC is the umbrella agency for all drug programs in this area and provides funding for the following:

CODAC CENTRAL — a central diagnostic and referral center located at Memorial Hospital, which serves as the entry point for patients into the CDOC system and includes a 10-bed inpatient treatment facility.

TERROS, INC. — contact and intervention houses (one in Phoenix and one in Tempe) which provides emergency service for young people on bad trips and overdoses. Phoenix Terros also operates a free medical clinic.

CREATIVE LIVING FOUNDATION — outpatient therapy program for youthful drug users.

VALLE DEL SOL — Narcotics Prevention Program aimed at reaching and rehabilitating the inner city, Mexican American addict.

ARIZONA FAMILY, INC. — operates a long term term rehabilitation center for hard-core addicts on a farm facility at Cornville, Arizona.

METHADONE MAINTENANCE PROGRAM — a new drug substitute for addicts who have failed in other programs.

DOPE STOP — a preventive education program utilizing 1,500 high school Teen Counselors to carry the anti-drug message to 5th, 6th, 7th and 8th graders throughout the County.

MESA PREHAB — a summer time preventive and counseling program for young people in the Mesa area.

BLACK OUTREACH PROJECT — a new project involving outreach centers staffed by indigenous workers designed to reach the Black addict and bring him into CODAC's comprehensive services.



Dean's Page

MED-START

The program now known as MED-START was begun in the summer of 1969 by the Committee on Minority Group Opportunities of the College of Medicine. That earlier program was described on this page about two years ago. Its development since then is significant.

MED-START is a joint effort, by the Committee on Minority Group Opportunities, members of the faculty of the College of Nursing, College of Medicine medical students, pre-medical, nursing and other interested University students. It attempts to reinforce the motivation of ethnic minority and economically disadvantaged students toward health services careers through a number of activities: Dissemination of health careers information in a series of seminars focusing on different areas of health care; contacts with high school and junior college counselors; MED-START programs counselor contacts with individual high school, junior college and college students; and maintenance of the MED-START office as a filtering center and library for current information on health science careers.

A major concern is the development of work experience opportunities. The Committee, under the chairmanship of Dr. Michael Wells of the Department of Biochemistry, inaugurated a work experience program for the summer of 1969, in which 13 Mexican-American, American Indian and Black students worked in various departments of the College of Medicine. The program was supported by the Josiah Macy Foundation.

The 1971 summer program was executed without Foundation support. Twenty-eight Mexican-American, Anglo, Papago, Yaqui and Black high school students participated. Participants were placed at the College of Medicine, the El Rio-Santa Cruz Neighborhood Health Center, Pima County Hospital, Pima County Public Health Department out-patient clinics, the Crippled Children's Clinic and other health delivery facilities.

In a follow-up to the summer program, Med-Start counselors are developing academic year work experience opportunities to continue the motivational enhancement possibilities offered by exposure to the environment of the health sciences.

The outstanding feature of the new program (MED-START) is the degree to which non-committee members are involved and the extension of its activities throughout a full academic year. This provides much greater input to students at all levels for motivation toward a decision for a career in the health sciences and facilitates identification of those selected for the

program. In addition, MED-START obtained Title One funds to hold three 2-day sessions during the 1971-72 academic year to bring information on health careers possibilities to minority and disadvantaged students. Those already participating are provided with counseling and a heavily emphasized tutoring program to ensure sound qualification for admission to medical school.

Selection of student participants is based on motivation to seek further academic training, high potential for work in the health profession, and a sense of social concern — desiring to work **for** the community. Counselors meet with prospective participants prior to the summer session to inform them and their parents about available opportunities. During the year they encourage the high school students to take the college entrance examinations. In the summer session counselors strive to develop the students' self-confidence and academic ability. Counselors also undergo training in techniques of counseling and development of raising motivational levels of minority students.

A very important aspect of the counseling program is the identification of all existing programs related to community health. Students are then made aware of the factors involved in health services in their own communities, rural or urban, and efforts are made to enable them to participate in those programs.

By extending MED-START through the academic year, the number of minority students affected has increased from 40 (the number of work slots available for the summer) to over 100. Further, the effect of the seminars and tutor-counseling is greatly felt, since they are a means of following up and showing an interest in those who choose to undergo the rigors of academic life to attain professional roles. This creates a "ladder" effect: that is, the minority students now in medical schools, nursing schools, etc. helping undergraduates pursue their goals, and they, in turn, working with the secondary school students, and so on down the line. Such efforts have far-reaching effects in both rural and urban communities by causing a positive change in the attitudes of minorities toward health professional roles.

Jack Layton

A.M.A. Delegate's Report

Food and Drug Administration

Your Arizona delegation introduced two resolutions into the House deliberations at the annual meeting concerning the F.D.A., which were born from the conviction that the increasing direction from "on high" was not necessarily in the best interests of our patients.

The large question is, how much control is needed to assure effective control? Does each measure of control assure equivalent benefit to the citizenry? Does the insistence on more and more data lead to better informed decisions or does it establish that the F.D.A. has not been remiss in covering every contingency?

Dr. Joseph Cooper of Howard University in Washington observed that, "Bureaucratic regulation tends to acquire an elegance of its own — a Baroque elegance. It propels into the future the protective devices engineered to assure that mishaps encountered in the past are not repeated, regardless of probability." Dr. Cooper continues with an observation with which we most heartily agree. "Rules, regulations, record keeping, and reporting requirements grow like barnacles on the hull of a ship, slowing its passage and adding to the cost of the journey."

The question of the future as far as physicians see it is whether or not rule book medicine is to supersede professional judgment. Physicians know that regardless of the desireability of such a circumstance, medicine has not reached a state of being more science than art.



PAUL B. JARRETT, M.D.

We are faced with a proposition of obedience to "expert opinion" having the force and weight of law. The question is asked, "To what extent should the practice of medicine, as a matter of law, be governed by pronouncements of expert opinion?"

The 1962 Amendments which were sired by Senator Kefauver, among other things, caused the F.D.A. to lay down such labyrinthine regulations for the filing of new drug applications that even our largest drug firms are dismayed. The legal and clerical costs have skyrocketed. There are at least 83 drugs available today to physicians and their patients in the United Kingdom that are not available in the United States. Our own Dr. Herman Lipow recently reported on some respiratory tract relaxants that he encountered and had large experience with in England that he fervently wishes were available here to treat his young asthmatic patients.

In addition, the F.D.A.'s expert panels have been sitting as judge and jury on 3,600 old drugs in which the panels also functioned as prosecutor, key witness and chief enforcement officer. Yet the panels are supposed to be advisory only. In fact they are not rendering advice, as James Kilpatrick says, "They are writing fiats."

A June 8 regulation of the F.D.A. will require the disclosure in prescription drug advertising and labeling of any NAS/NRC Drug Efficacy Study Group evaluation that a product is less than "effective" in a recommended use. This will require the labeling and advertising of about a thousand drugs that a ruling of "probably effective" or possibly effective" has been handed down. It makes no difference that many of these products have been used for years by the profession with satisfaction and beneficial effects, and no matter that "probably effective" and "possibly effective" have no consistent meaning as applied by 30 different panels of NAS/NRC. With these evaluations, F.D.A. gives a year to make up the "evidence gap" for "probably effectives" and six months for the possibles".

If safe and effective drugs are needlessly denied to physicians by administrative fiat, the profession will lose useful tools and patients will suffer.

The orders withdrawing drugs from the market were first issued in January of 1968 when the commissioner as a matter of law declared that Rutin, Quercetin and Hesperidin were not effective "for use in man for any conditions." The bioflavinoids go back to the late 30's and many have used them with great satisfaction in capillary fragilty for many years. Remember Abbott's Blutene Chloride tablets for uterine bleeding? Verdict: ineffective. Sentence: Withdrawal. Anergex, a poison oak, extract: Withdrawn. Ilotycin Gluceptate Otic: Withdrawn. Tergemist: Withdrawn. Achromycin Nasal Suspension Spray: Withdrawn. Albamycin T: Withdrawn. Panalba: Withdrawn; and on and on and on.

The informed judgments of physicians who have had wide experience with these drugs are not simply being rejected, they are being ignored.

We asked in Arizona Resolutions 15 (A-69) and Resolutions 45 and 46 (A-71) that physicians in practice be given a part in the life and death decision making concerning drugs and investigative requirements of the F.D.A. These resolutions all passed unanimously along with resolutions 64 (Ohio A-70), 12 (Nevada A-71), 14 (Connecticut A-71), 21 (Florida A-71), 87 (Section on Family Practice A-71) all directed toward removal of drugs from the market and/or the F.D.A.

Hopefully the Board of Trustees of the AMA will soon sense the feeling of frustration and urgency that has motivated its constituency to severally introduce resolutions concerning the F.D.A. beginning with Arizona in 1969.

Letters to Editor

Editor, Arizona Medicine
810 W. Bethany Home Rd.
Phoenix, AZ 85013

Dear Sir:

As the movement to extend mass health evaluation gathers momentum, the report on Hospital Admissions Pulmonary Function Screening in the August, 1971, issue of Arizona Medicine emphasizes the need for scrutiny and evaluation of testing programs. The concept of health testing seems established as it attempts to increase availability of services, reduce costs, assist physicians in expanding health evaluation, and reduce unnecessary demands on the physician to allow him to increasingly devote himself to patients with latent or overt problems. In addition, hopefully, more people will receive a better level of care.

The importance of pulmonary disease in Arizona is well known and obviously deserves a high priority as we develop testing programs. The Pulmonary Function Screening Project was based on the assumption that respiratory impairment is often not apparent after careful history, physical examination, and chest X-Ray, but can be detected by screening spirometry. Furthermore, it is tempting to infer that such positive information would allow physicians to evaluate, treat, and prevent subsequent overt pulmonary disease.

The proportion of abnormal studies (almost half the referrals) seemed high, and the authors concluded that a number of patients with preexisting diseases should have been excluded from the program. In contrast, Collen[1] reported on 44,663 outpatient spirometry examinations and found only 2.2% of tests to be abnormal, and even in patients over 60 years of age, only 2.7% of tests were positive. Other experience suggests that at least 30% of subjects tested have abnormal forced expiratory spirograms.[2-4] My point is not to deny that abnormal tests are common, but rather to question the race to the market place without some assurance that we can measurably reverse or retard impending disease beyond reaffirming our stand that smoking and respiratory irritants cause respiratory impairment. Furthermore, although there is general acceptance of pre-operative respiratory evaluation and therapy in selected patients, have we really been persuaded that all adult patients admitted to the hospital, or even all pre-surgical patients need routine pulmonary function testing? Positive testing results appropriately indicate the need for additional evaluation which could include complete ventilation and perfusion studies, blood gas studies, skin testing and hopefully examination by an internist with expertise in pulmonary disease. This could be an expensive evaluation for a patient with chronic bronchitis whose principal need is to stop smoking. And what of the expense and anxiety to the "worried well" individual with a false positive screening test and a negative follow up examination. Is that patient relieved of fear and apprehension when he is told that after all, he does not have emphysema.

Specifically, do we need more evidence and reassurance that testing programs merit the commitment they will require? Is it necessarily a negative attitude to ask for more long term proof that early detection of illness can influence the natural course of disease? (e.g., is it important to conduct mass screening programs for prediabetes when we know that the course of the disease, including complications, is unaltered by insulin therapy?) Is it unreasonable to point to the low yield and high cost of detected illness under mass programs and suggest that indiscriminate, poorly conceived programs can divert

efforts and money from other health priorities?

Technocracy is available, defense and space industries are depressed, and the advertising and sales forces of the electronic and data processing industries are now in the process of directing themselves to the needs of the health care industries. Hopefully, priorities will be established, and this means that we will need to require not only availability, but also relevance and some degree of cost-benefit from a testing procedure. We need medical leadership to make these determinations which will affect our entire population.

Sincerely,
William R. Myers, M.D.

1) Collen MF et al: Dollar Cost per Positive Test for Automated Multiplasic Screening. New Eng J Med 283:459-463, 1970.
2) Caceres, C.A., Ayers, W. R.: Health Testing with Automated Techniques. Bull N.Y. Acad. Med 45: 1277-1287, 1969
3) Suprenant, EL, Vance, JW: Evaluation of Methods for the Early Detection of Chronic Obstructive Ventilatory Diseases. Dis. Chest 52:760-66, 1967.
4) Barclay, W. R.: The Practicality of Case Finding in Pulmonary Emphysema. Amer. Public Health (Supp) 53:16-17, 1963.

Dear Editor:

As a fellow practicing physician you are well aware of the profound changes about to occur in the practice of medicine. New federal guidelines and financing mechanisms will soon become a reality in our state and counties. Efforts are already being made by organizations within our state to influence the direction of these changes. Politicians, educators, big businesses, hospital organizations and insurance companies already have **their** bids prepared.

As you will see in the enclosed letter, the Hospital Association has made a bid to enlist the Arizona Medical Association in conjunction with Blue Cross and Blue Shield to provide a "statewide" system. This system would be primarily managed by the Hospital Association and Blue Cross. The State Health Plan designed by the Health Planning Authority will also soon be announced. This system would be controlled through the planning councils, legislature, and conceivably State Board of Health.

It becomes critical at this time, therefore, for our State Society and collective County Societies to develop a system which can best represent those men who must, after all, provide these services, the practicing physicians.

As President of the Maricopa County Medical Society, I urge you to support the development of a United Foundations of Arizona. By so doing we can establish at once a management system which can cope with the multitude of innovations and various programs which are being developed now and in the future.

It has become quite clear that the interests of Blue Cross and Blue Shield both on a national level as well as local level are those of any insurance company — to remain in the insurance business.

The Foundations, on the contrary, represent a management system which represents the total input of the medical profession in their efforts at cost control, hospital utilization, benefit design, fee schedules, minimum standards and a multitude of other innovations no single insurance company is capable of establishing.

With changes imminent which could be with us forever, it is time the medical profession establish itself in the management system field free from conflicting philosophies of any interlocking insurance company.

Although the Blue Cross and Blue Shield deserve our full support as an insurance provider, those functions of management and control of professional services should be reserved solely to the profession, alone.

Your support for a United Foundations of Arizona is absolutely essential if the medical profession, is to have a clear voice in the changes of the future.

Let your State Association representatives know your wishes on this important subject today!

Very truly yours,
Charles H. Finney, M.D.
President
Maricopa County Medical Society

September 22, 1971
Mr. Bruce Robinson, Executive Director
Arizona Medical Association
810 West Bethany Home Road
Phoenix, Arizona 85013

Dear Bruce:

The Arizona Hospital Association Board of Directors meeting on Friday, September 17, 1971, reviewed Draft No. 3, Pre-Admission Screening and Utilization Review Program, with John Foster, Executive Director, Blue Cross and Blue Shield.

You are well aware this subject has become one of significant discussion at both the national and state level. The merits of applying the Utilization Review Program to all patients takes on greater meaning in this day of public demand for a closer look at increasing health care costs.

I am certain we both agree that each Association is doing all it can in these busy times to look at every means of reviewing our health delivery system and the resulting services and costs to patients.

Our Board took the following action at this meeting, and is very desirous of cooperatively working with the Arizona Medical Association:

"Statement of Principle of the Board of Directors of the Arizona Hospital Association with respect to utilization review:

1. Hospitals have a duty to implement effective utilization review programs.
2. Hospitals should realize that federal programs regulating these matters are likely to evolve in a short period of time.
3. The review process should involve participation of the community as represented by the hospital's governing board which delegates the utilization process to the hospital's medical staff.
4. With the cooperation of ArMA, ArHA, and Blue Cross and Blue Shield, a utilization review program should be developed that will, in accord with these principles, extend benefits to all patients rather than any special group of patients."

We would very much appreciate your taking this action under consideration, and we stand ready to be a party to future developments in this regard.

Look forward to hearing from you soon.

Sincerely,
Robert T. Moore
Executive Director

In Memoriam



L. DONALD FUSCO, M.D.
1912-1971

Dr. L. Donald Fusco, 59, founder and director of the Joseph Fusco Memorial clinic here in 1954, died September 13, 1971 in John C. Lincoln Hospital.

Dr. Fusco was born in Syracuse, N.Y., he was graduated from Syracuse University and earned his medical degree at the University of Bologna, Italy. While studying in Italy he was drafted into the Italian Royal Army in 1942, but discharged in 1943 because of his American citizenship. When studying diseases of the chest at the Forlanini Institute, he was recalled to serve in the Italian Republic Army. During this service he was arrested and condemned to the firing squad, rescued on the eve of execution and sent to a concentration camp — from which he escaped in 1945 to cross to the American lines where he joined the American forces. In 1946 he returned to the United States and came to Arizona in 1947 as a resident surgeon in St. Monicas Hospital; entering private practice in 1947.

Dr. Fusco was a member of a Masonic lodge in Syracuse. A member of the Phoenix Consistory and El Zaribah Shrine and listed in Who's Who in the West and in the Dictionary of International Biography in 1969-70. He was a diplomate of the International Board of Proctology and recipient of a Doctor of the Year national award in 1952. He was a member of the

International Academy of Proctology, American College of Angiology, International College of Angiology, American Society of Abdominal Surgeons, American Society of Geriatrics, New York Academy of Science, and UNICO National Service Club, Maricopa County Medical Society, and the Arizona Medical Association.



HOWARD E. LISTON, M.D.
1920-1971

Howard Edson Liston was born in Omaha, Nebraska, the son of a physician, on September 11, 1920, and died in Phoenix, Arizona, August 30, 1971. He received his AB and BS degrees from the University of Nebraska and in September 1944 graduated from the University of Nebraska Medical School. Following his internship at the Presbyterian Hospital in Denver he went directly into the Army, serving from July 6, 1945, to January 23, 1947, and then returned to Elmwood, Nebraska, where he had a busy general practice until January 1954 when he started an Internal Medicine Residency at the VA Hospital in Memphis, Tennessee. He later transferred to the VA Hospital in Denver for the remainder of his period of residency. On October 7, 1956, he joined the Medical Staff at the VA Hospital in Phoenix where, from then on, his warm personality and uncompromising dedication to nothing less than the best patient care endeared him to personnel and patients alike. In September 1962 he became a Diplomate of the American Board of Internal Medicine and in November 1966 was elected to Fellowship in the American College of Physicians. In June 1968 he became a Fellow in the American College of Chest Physicians, as well. In addition, he was a member of the American Medical Association, the Maricopa County Medical Society, and the Internal Society of Internal Medicine. When a Pulmonary Disease Section was established at the Phoenix VA Hospital, his primary interest in chest diseases made him the logical choice to be Chief of it, and he single handedly developed it into a first class diagnostic and therapeutic section, staffed by skilled and dedicated personnel who were perceptively selected and largely trained by him. But there was nothing insular about his medical interests. He immersed himself in community medical activities too and, in recognition of his abilities and interest in pulmonary disease and pulmonary research, was asked to serve as chairman of the Project Review Sub-Committee of the Greater Maricopa Tuberculosis and Health Association and did so unstintingly. Through the years he found time and energy to devote to other things as well. He had deep religious feeling and was a loyal Episcopalian. He and his wife, Elaine, whom he had married in July 1942, became the parents of three fine boys who, under the benevolent guidance of their parents, all fulfilled their early promise. Two are now physicians; the third, an aeronautical engineer. His home life was a warm, comfortable one and he was a devoted father and husband. His multitude of friends and patients are all deeply conscious of the gap he has left and mourn his passing.

Topics Of Current Medical Interest

OTOLOGIC SEMINARS

A series of "Otologic Seminars" on film produced by the Los Angeles Foundation of Otology and sponsored jointly by St. Luke's Hospital of Phoenix and the Arizona Society of Otolaryngology as paying subscribers will be shown once a month. In Tucson they will be held at St. Joseph's Auditorium at 8 p.m. In Phoenix at the headquarters building of the Arizona Medical Association at 8 p.m.

The fee will be $5 per physician per showing. Interested nursing and audiologic personnel will pay no fee. These seminars will be valid for credit toward the Educational requirements established by ArMA.

PHOENIX schedule of showings is as follows:

Chronic Ear Surgery — Nov. 16, 1971
James Sheehy

Meniere's Disease — Dec. 14, 1971
Jack Pulec

Otosclerosis — Jan. 18, 1972
Howard House

Hearing Aid Evaluation — Feb. 15, 1972
Eddie Johnson

Glomus Tumors — March 14, 1972
William House

Physiology of the Ear — April 18, 1972
Merle Lawrence

Acoustic Neuroma — May 16, 1972
William House

Temporal Bone Pathology — June 13, 1972
Harold Schuknecht

TUCSON schedule of showings is as follows:

Tympanoplasty Techniques — Nov. 18, 1971
Fred Guilford, M.D.
Houston, Texas

Tympanoplasty Technique — Dec. 16, 1971
Gordon Smyth, M.D.
Belfast, Ireland

Accustic Neuroma — Jan. 20, 1972
William F. House, M.D.
Los Angeles, California

Physiology of the Ear — Feb. 17, 1972
Merle Lawrence, M.D.
Ann Arbor, Michigan

Glomus Tumors — March 16, 1972
William F. House, M.D.
Los Angeles, California

Hearing Aids — April 20, 1972
Eddie W. Johnson, Ph.D.
Los Angeles, California

Meniere's Disease — May 18, 1972
Jack L. Pulec, M.D.
Los Angeles, California

Otologic Heritage — June 15, 1972
George E. Shambaugh, Jr., M.D.
Chicago, Illinois

Any questions regarding the Otologic Seminars should be directed to Richard D. Zonis, M.D., 7300 4th St., Scottsdale, Arizona, 947-6117 or to Otto Gambacorta, M.D., Thomas Davis Clinic, Tucson, Arizona, 327-7311.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

PROFESSIONAL COMMITTEE

Meeting of the Professional Committee of the Arizona Medical Association, Inc., held Saturday, September 11, 1971, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 1:25 p.m., Albert G. Wagner, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held November 7, 1970 were approved as distributed.

APPOINTMENTS

Dr. Linkner has been reassigned to the Chairmanship, Section on Drug Abuse. Due to the recent resignation of Rudolf Kirschner, M.D., a new chairman of Allied Medical Groups has not been appointed.

SECTION ON EMERGENCY CARE

Emergency Medical Services

Dr. Schaller introduced Mr. Howard Adams, Chairman, Subcommittee on Emergency Medical Services, Interim Committee on Physician's Assistants and Emergency Medical Services of the Arizona 30th Legislature and his secretary, Miss Nelson. Also introduced were Mr. Gan, Executive Director of the Maricopa Comprehensive Health Planning Authority and Dr. Schamadan, who are interested in the developments of this legislation.

Mr. Adams reviewed for the committee the first draft of proposed legislation establishing the Division of Emergency Medical Services within the State Department of Health; providing for appointment of Director thereof and prescribing his powers and duties; providing for cooperation of private, public and governmental agencies; providing for adoption of standards for and licensing of ambulances and emergency receiving centers; providing for adoption of standards for training and certification of ambulance attendants and drivers and providing for their immunity from tort liability; prescribing financial liability for emergency medical services rendered; providing for partial reimbursement for nonpayment for services rendered; establishing revolving fund for such purpose; amending title 36, Arizona Revised Statutes, by adding Chapter 9.1, Articles 1 to 4, inclusive; amending Sections 32-1471 and 41-1711, Arizona Revised Statutes, and making an appropriation.

It was moved and carried to recommend to the Board of Directors that the association support the concept of the Emergency Medical Services legislation.

Physician's Assistants

Received for information was the position paper on Physician's Assistants which was adopted by the Board of Directors during meeting held on January 31, 1971.

Dr. Schaller informed the committee that first draft of proposed legislation was written by the Subcommittee on Physician's Assistants, Interim Committee on Physician's Assistants and Emergency Medical Services of the Arizona 30th Legislature and that the Association is actively working on this project. Received for information only.

Highway Directional Signs

Received for information was Resolution 1-71 of the House of Delegates dealing with Highway Directional Signs for Emergency Medical Facilities. A letter from the Arizona Highway Department in response to the resolution noted that "The Manual for Signing and Pavement Marking of the National System of Interstate and Defense Highways, published by the American Association of State Highway Officials, provides the standards for signing all Interstate highways in Arizona. The Manual on Uniform Traffic Control Devices for Streets and Highways, published by the National Joint Committee on Uniform Traffic Control Devices, which has been adopted as the Arizona State manual, prescribes signing standards for all non-Interstate roadways within the State of Arizona. These two documents do provide for the standard "Hospital" signing, but do not include the emergency medical facilities signing which you have suggested for use in the State of Arizona."

It was suggested by the State Highway Department "that the Arizona Medical Association, Inc., through their national organization, make their position known to the agencies responsible for establishing the above-mentioned signing standards", which has been accomplished.

SECTION ON POISON CONTROL

Dr. Antos reported that the following have accepted membership on the Section on Poison Control: Ernst Born, M.D., Ralph Fargotstein, M.D., Albert L. Picchioni, Ph.D., and Thomas H. Taber, Jr., M.D. It was suggested that a pediatrician be appointed to the Section due to their obvious interest in this subject.

SECTION ON ALLIED MEDICAL GROUPS

Medical Education and Community Orientation—SAMA

Dr. Linkner introduced Resolution 10-71, Medical Education and Community Orientation as adopted by the House of Delegates on May 1, 1971 and Mr. James Barsz, President, Arizona Chapter, Student American Medical Association and Miss Michele Lunde.

Mr. Barsz reviewed the proposed MECO program for Arizona while Miss Lunde explained the program as developed in Texas where she was accepted in the program during the past summer.

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association support in principle the Student American Medical Association MECO program and offer assistance to the Student American Medical Association in this endeavor.

Chiropractic

Dr. Linkner presented legislation which was introduced during the last session of the Arizona Legislature to update the Chiropractic Practice Act. It is assumed that this or a resemblance therof will be reintroduced during the next session of the legislature.

A considerable amount of discussion ensued about the legislation and whether or not this Association should support or oppose certain portions of this legislation, i.e.,

unprofessional conduct to advertise and use of x-ray.

It was moved and carried to recommend to the Legislative Committee and the Board of Directors than any communication from this Association to the Arizona Legislature in regard to proposed Chiropractic legislation state that ArMA is unequivocally opposed to any support of Chiropractic. Further, those portions of legislation which are particularly hazardous to the public should be pointed out.

SECTION ON ArMA-ASNA LIAISON

Master Plan for Nurses

Dr. Payne informed the committee that the ArMA Board of Directors endorsed the Master Plan for Nurses in Arizona during the meeting held July 25, 1971 and that he is active on the steering committee. Information only.

Revision of Nurses Practice Act

Considerable discussion ensued regarding possible revision of the Nurses Practice Act in this state and others to permit nurses to function in expanded roles. A prepared statement by Mrs. Hazel Bennet, R.N., Executive Director, Arizona State Nurses' Association, to the Subcommittee on Physican's Assistants, Interim Committee on Physician's Assistants and Emergency Medical Services of the Arizona Legislature on August 4, 1971, was reviewed.

It was moved and carried to recommend to the Board of Directors and the Legislative Committee that any consideration or revision of the Nurses Practice Act must assure that the physician is legally, morally, and professionally responsible for the care of the whole patient.

SECTION ON WOMAN'S AUXILIARY ADVISOR

Dr. Payne informed the committee that Mrs. Charles E. Henderson, President, is maintaining excellent communication with him.

SECTION ON REHABILITATION MEDICINE

Dr. Spendlove informed the committee that he is actively organizing a membership and that suggested topics for their first meeting include the Stroke Program and the Spinal Program as well as legislative activities regarding the Manpower Bill.

SECTION ON PUBLIC HEALTH

Venereal Disease

Dr. Ganelin reviewed the AMA Statement on Venereal Disease in which they urge medical societies to acquaint the membership with the growing and alarming dimensions of the VD problem.

It was suggested that Dr. Kossuth, Commissioner of the State Department of Health, present a summary of statistics and suggested treatment programs to Mr. Robinson for inclusion in **Medical Memos.**

Rural Health

Dr. Ganelin informed the committee that this Section does not have a functioning rural health committee, however, he was planning to attend a meeting with the AMA's Council on Rural Health on January 14-15, 1972, to be held at the Camelback Inn, Scottsdale, Arizona.

Pollution Control

The charge of Resolution 11-71, Pollution Control, adopted by the House of Delegates on May 1, 1971, was discussed.

It was suggested that Kent Durfee, M.D., be considered for chairmanship of this committee.

SECTION ON PERINATAL & MATERNAL MORTALITY

Dr. Kossuth informed the committee that he had inquired of this Association and others of a proposed "Postpartum Care Faciilty." In that the consensus of opinion was that there was no advantage in developing a lesser facility, the subject has been closed.

Meeting adjourned at 4:37 p.m.

Edward Sattenspiel, M.D.
Secretary

AD HOC COMMITTEE ON LOCUM TENENS & HEALTH MANPOWER

Meeting of the Ad Hoc Committee on Locum Tenens and Health Manpower of the Arizona Medical Association, Inc., held Sunday, September 19, 1971, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 10:09 a.m., Manus R. Spanier, M.D., Chairman, presiding.

MINUTES

Minutes of the meeting of September 20, 1970 were approved as distributed.

DEMOGRAPHIC STUDY

Mr. Robinson reported that the Demographic Study that was prepared by the Board of Medical Examiners in conjunction with Dr. Alan Humphrey of the Regional Medical Program had been published in the August issue of **Arizona Medicine**; that reprints of the Study are available and that reprints of the Study are being provided to physicians who are seeking location within Arizona, to give them a little background and information about Arizona and its medical makeup.

Dr. Thompson and Mr. Boykin indicated that the intent was to continue the study on an on-going basis so that over the years ahead, these figures would be up-dated and reviewed to show trends.

It was also suggested that this information could be made available to legislators when a need arose.

LOCUM TENENS — PHYSICIAN PLACEMENT SERVICE

Mr. Robinson reported that the Locum Tenens program started in 1970 resulted in 30 physicians who offered to do locum tenens work and during the last 12 months only 12 requests for these services had been noted. Mr. Robinson also reported that the last publication of the brochure "Physicians Seeking Location in Arizona" included the listing of 331 physicians who are seeking locations in Arizona or seeking to relocate in Arizona. This brochure is provided to anyone who is seeking additional physician services; communities as well as other physicians. It was also reported that there seems to be a great increase in the number of physicians who are being licensed in Arizona, which may ultimately solve the physician shortage problem in this state.

PHYSICIAN'S ASSISTANTS

Dr. Hugh Thompson reviewed the activities relating to Physician's Assistants that have occurred during the past 12 months throughout the United States. He indicated that contrary to Secretary Richardson's position and the AMA's position that licensing and certification laws not be expanded during the next two years, that many states have passed such statutes.

Physician's Assistants in Arizona

Dr. Thompson reported that three training programs are presently in existence that will affect Arizona. The Good Samaritan Hospital Program for Pediatric Nurse Associates and two Bureau of Indian Affairs Programs, one in Gallup, New Mexico and one in Arizona, training physician's assistants for use on the Indian reservations. These are two year training programs which are currently in the middle of their first year of operation. He indicated that the average age of the participants was about 30; mixed, both between men and women and representing the variety of tribes represented in Arizona. Several problems including the lack of some participants to speak the Navajo language had been encountered and solved.

Proposed Rough Draft Physician's Assistants Bill for Arizona

The committee reviewed in-depth the first draft of a physician's assistants bill that has come out of the joint interim committees of the Legislature. It was pointed out that there were several deficiencies in the bill insofar as the Arizona Medical Association is concerned. The first one being the use of the word paramedical assistants instead of physician's assistants. The second being the placing of the control and certification of these new personnel in the Department of Health instead of the Board of Medical Examiners, and the third being the provision that a "health care institution" could be an employer, and the fact that no where in the bill does it state that the new assistant must be directly responsible to a physician. Considerable discussion by all members and guests of the committee on these points ensued.

It was moved and carried that all efforts be made to alter this draft by removing the words "Paramedical Assistants" and replacing them with "Physician's Assistants."

It was moved and carried that the certification and control of Physician's Assistants should be placed in the hands of the Board of Medical Examiners and not in the Department of Health.

It was moved and carried that an addition to the bill should be made wherein it clearly states that a Physican's Assistant can work only under the supervision of a Physician, even though the Physician's Assistant may be technically an employee of a health care institution.

Following additional discussion on the importance of placing the control of physician's assistants in the Board of Medical Examiners;

It was moved and carried that if we are unsuccessful in getting the original draft of the bill altered by having the control placed in the Board of Medical Examiners instead of the Board of Health, that we should make every effort to see that the bill is not enacted.

It was moved and seconded that we reaffirm our support of H.B. 21 introduced in the 1971 Legislature on this matter and perhaps a modification setting forth a date specific wherein the Board of Medical Examiners would have to have rules and regulations prepared.

PLACING PHYSICIANS IN RURAL AREAS BOMEX PROPOSAL

Mr. Boykin, Executive Director of the Board of Medical Examiners, reviewed his idea regarding possible changes in the Medical Practice Act that would make it possible to place physicians who were partially qualified for licensure but not completely in communities where physician shortages exist. The basic mechanism to accomplish this would be by giving the Board the prerogative of issuing a limited license to practice in a specific community for a limited period, during which time the licentiate would have to over come those deficiencies which prevented him from getting a regular full license.

It was moved and carried that the committee approve the concept as outlined by Mr. Boykin and that the chairman appoint a subcommittee to work with the Board of Medical Examiners in developing the concept further.

EMERGENCY HEALTH PERSONNEL ACT OF 1970

Dr. Kossuth reviewed Public Law 91-623 that establishes the Emergency Health Personnel Act of 1970. This Act authorizes the Secretary of HEW to assign commissioned officers and other public health service personnel to provide health care and services for persons residing in areas which are designated by the Secretary as areas of critical health manpower shortage. Such action by the Secretary would be initiated by request of the state or local health agency or other public or nonprofit health organization, followed by certification to the Secretary by the state and the district medical societies for that area and the local government for that area, of such health personnel are needed for that area. Such care and services would be provided in connection with 1) direct health care programs carried out by the service, 2) any direct health care program carried out in whole or part with federal financial assistance, 3) any other health care activity which is in furtherance of the purposes of the Act. Mr. Robinson reviewed a survey taken to develop information on areas of shortage. While the survey is by no means complete, it did point up many factors that should be considered in placing physicians in rural communities; such factors as not only the population of the town but its proximity to the nearest health facility center.

It was determined that the committee should follow the developments of this particular program.

COMMUNICATIONS

The chairman reviewed Francis M. Findlay, M.D.'s letter of resignation and directed that a letter indicating our sincere regrets be forwarded to Dr. Findlay.

Meeting adjourned at 12:56 p.m.

Edward Sattenspiel, M.D.
Secretary

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc., held Saturday, September 25, 1971, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 3:08 p.m., James L. Grobe, M.D., President and Chairman presiding.

MINUTES

Minutes of the meeting held July 24, 1971, were approved as distributed.

TRAVELERS — ANNUAL MEETING

It was agreed that representatives of the Travelers Insurance Companies be invited to the 1972 Annual Meeting and to address the House of Delegates.

ArMA FOUNDATION — WILLS

Mr. Robinson reminded the members that Dr. Scott requested a system be established to remind physicians of the Foundation particularly as it relates to having the Foundation named in the physician's will. Such letter and brochure have been prepared and were reviewed by the committee. Received.

BOARD AGENDA

The committee reviewed the agenda for the Board of Directors meeting of September 26, 1971, and formulated various suggestions and recommendations.

COMMUNICATIONS

Philip S. Greenbaum, M.D. — letter 8/23/71

Dr. Greenbaum's letter relating to the professional aspects of office location was reviewed.

It was determined that Dr. Greenbaum be advised that we support his concern.

Meeting adjourned 4 p.m.

Edward Sattenspiel, M.D.
Secretary

BOARD OF DIRECTORS

Meeting of the Board of Directors of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, September 26, 1971, a quorum being present, convened at 10:14 a.m., James L. Grobe, M.D., President and Chairman presiding.

WELCOME

Dr. Grobe welcomed the various guests and Charles E. Henderson, M.D., gave the invocation.

MINUTES

The minutes of the meeting held on July 25, 1971, were approved as distributed.

ArMPAC BOARD OF DIRECTORS

Don V. Langston, M.D., Chairman of ArMPAC Board of Directors, reviewed briefly the activities of that organization. He indicated that to date we have a new high for membership and that it appears to be growing gradually.

Dr. Langston discussed the advisability of having a leadership conference in conjunction with AMPAC in January or February.

It was moved and carried that a Joint Leadership Conference be developed with the approval of this Board of Directors.

BOARD OF DIRECTORS

BOMEX Appointment

Dr. Grobe reviewed Governor William's letter of August 27, 1971, wherein he appointed E. Charles Bill, M.D., a member of the Board of Medical Examiners to replace Francis M. Findlay, M.D. Received.

EXECUTIVE COMMITTEE

Financial Statement for Period Ending 8/31/71

At the request of Dr. Scott, Dr. Dew reviewed the Financial Statement for the period ending August 31, 1971, and recommended certain budget adjustments.

It was moved and carried that the following budget adjustments be made:

509g	Supplies	$1,000.00
514g	Equipment Maint. & Rental	1,240.00
515g	Refunds—AMA Commissions	408.60
500o	Medical Education Committee	3,000.00

Membership Classification Changes Approved

A. Pima County

Michael Bernfeld, M.D. — Active to Associate — Account Retirement — Dues Exempt — Effective 1/1/71

John R. Phillips, M.D. — Active to Associate — Account Illness — Dues Exempt — Effective 1/1/71

AD HOC COMMITTEE ON MEETING ARIZONA'S MEDICAL NEEDS

Dr. Grobe indicated that the following men have accepted appointment to this committee:

Paul B. Jarret, M.D., Chairman
Deward G. Moody, M.D.
John Oakley, M.D.
Augusto Ortiz, M.D.
Wallace A. Reed, M.D.
Seymour I. Shapiro, M.D.
Oscar A. Thorup, Jr., M.D.

AD HOC COMMITTEE ON ArMA PROGRAM DEVELOPMENT AND ADMINISTRATIVE EVALUATION

Dr. Grobe reported that the following men have accepted appointment to this committee:

W. Albert Brewer, M.D., Chairman
W. Scott Chisholm, Jr., M.D.
Richard L. Dexter, M.D.
George W. King, M.D.
James F. Martin, M.D.
Patrick P. Moraca, M.D.
David D. Smith, M.D.

GOVERNMENTAL SERVICES COMMITTEE

Mr. John C. Foster, Executive Director, Arizona Blue Cross-Blue Shield, presented in-depth a suggested "Pre-admission Screening and Utilization Review Program" setting forth certain asumptions as follows:

"Implementation of federal laws such as the proposed H.R. 1, the Bennett Amendment and others will certainly require that pre-admission screening and utilization review (peer review) will be essential in future medical programs. Local, regional and state autonomy can be achieved if prior to the passage of such laws, an integrated system is developed and a matter of record.

It is generally agreed that utilization review is done best at the local level. Establishment of what may be considered "local" is open to debate, whether a geographical area such as a county constitutes "local", or whether a municipality constitutes same can be argued pro and con without discernible result. It would appear logical to establish PEER REVIEW consisting of pre-admission screening and utilization review by the medical staff of each hospital as the most "local" level.

The most economical method of pre-admission screening and utilization review is one which does not tax the purchaser, the carrier or the individual hospital for any higher cost than is needed to perform the job properly. The assumption here is that the hospital already has staff that can be utilized in this project without materially adding to costs.

Statistical review by statewide agencies is a most desirable adjunct to the basic screening and utilization review at the hospital level. The logical follow-through

in statistical review would appear to be through the medical profession at the state level.

Effective utilization review should encompass all admissions, however, inasmuch as Blue Cross has certain concerns for its own clientele plus the Federal programs that it administers, it will be necessary that the program become effective for at least that segment of the population provided for by this organization. The Federal Employee Program, which constitutes the single largest underwritten group in the country, has experienced drastically increased utilization and escalation of costs in the past year. Medicare is requiring documentation as to the necessity of admission and also the necessity to maintain the patient when the level of care has become such that hospitalization is no longer indicated.

To establish a program of effective peer review promptly, it is necessary to secure the cooperation of all providers of health care. Basically, the program should include provision for a qualified hospital employee to be coordinator for the program. The medical staff must accept the responsibility of maintaining an effective utilization review committee with participation in the program by a member or members of the committee on a daily basis.

There should be an analysis made of the data developed by each hospital and by attending physicians, which then should be analyzed by the carrier's staff, subject to review by the State Medical Association. The State Medical Association, in its judgment, may refer the data to county medical societies or in the case of osteopathic hospitals, to the State Osteopathic Association, and in the case of Podiatrists, to the State Podiatry Association."

Dr. Grobe then reviewed the Arizona Hospital Association's letter of September 22, 1971, on this same matter. This letter stated "Statement of Principle of the Board of Directors of the Arizona Hospital Association with respect to utilization review: 1) Hospitals have a duty to implement effective utilization review programs. 2) Hospitals should realize that federal programs regulating these matters are likely to evolve in a short period of time. 3) The review process should involve participation of the community as represented by the hospital's governing board as well as participation by the hospital's organized medical staff. 4) With the cooperation of ArMA, ArHA, and Blue Cross and Blue Shield, a utilization review program should be developed that will, in accord with these principles, extend benefits to all patients rather than any special group of patients."

Much discussion ensued with many questions about the implications of this program were asked and answered.

It was moved and carried that these excellent suggestions as outlined by Mr. Foster, be passed along to the Peer Review Advisory Council for their study and recommendation with the stipulation that their recommendation be ready in time for the next Board of Directors meeting. The Peer Review Advisory Council also be empowered to appoint, if they deem it advisable, three of its members to meet with three members of the Arizona Hospital Association and three members of the Arizona Blue Cross-Blue Shield, to develop details of this proposed program. Mr. John Foster is to be asked to attend the meeting of the Peer Review Council when it considers this matter.

LEGISLATIVE COMMITTEE

Dr. Dew reviewed the legal opinion prepared by Mr. Jacobson relating to S.B. 155 (Treating Minors for Venereal Disease Without Parental Consent) and its effect on the liability of a physician to a minor for revealing confidential information to the parents of the minor.

The essence of the opinion is that disclosure of medical confidence by the physician to the parent might very well subject the physician to civil liability in an action brought against him by the minor. Received for information.

AD HOC COMMITTEE ON LOCUM TENENS & HEALTH MANPOWER

Committee Appointments

It was moved and carried that James L. Schamadan, M.D., and David D. Smith, M.D., be appointed as regular members of the Ad Hoc Committee on Locum Tenens & Health Manpower.

OCCUPATIONAL HEALTH COMMITTEE

The recent negotiations with the Industrial Commission of Arizona regarding the revision of the fee schedule was reviewed in-depth by Drs. Jarret, Green and others, as it related to the matter of providing anesthesiology services. It was noted that should the Industrial Commission adopt the Association's recommendation on fees, that this problem would undoubtedly be taken care of.

Dr. Grobe reviewed the Industrial Commission's letter of August 20, 1971 wherein it was stated that action could not be taken by the Industrial Commission at this time due to the President's freeze on all prices. It was pointed out, however, that the Commission was considering the matter and would undoubtedly have a decision following the lifting of the President's wage and price freeze anticipated in November. Received for information.

PROFESSIONAL COMMITTEE

Emergency Medical Services

Dr. Schaller, Chairman, Section on Emergency Care of the Professional Committee, reviewed briefly the proposed legislation to establish a Division of Emergency Medical Services within the State Department of Health.

It was moved and carried to support this concept of the Emergency Medical Services legislation and to advise the Legislative Committee of this action.

Student American Medical Association's MECO Program

Dr. Wagner, Chairman of the Professional Committee, reviewed the proposed MECO Program that was presented to the Professional Committee by Mr. James Barsz and Michelle Lunde, representing the Arizona Chapter of the Student American Medical Association. Many aspects of this program were discussed by members of the Board of Directors.

It was moved and carried to support the MECO Program in principle; that the matter is to be then referred to the Medical Education Committee for study and implementation asking them to consider the idea of physician's financial participation and that the Medical Education Committee consider the suggestion that the president, or representative of SAMA, be a guest

at all Medical Education Committee meetings. That the SAMA representatives are to be advised of this action.

Proposed Chiropractic Legislation

Dr. Wagner reviewed the discussion of the Professional Committee, which was brought about by request from the chiropractors for assistance in getting legislation passed which would significantly alter the chiropractic licensing statutes.

It was moved and carried than any communications from this Association to the Arizona Legislature in regard to proposed chiropractic legislation state that the Arizona Medical Association is unequivocally opposed to any support of chiropractic and further, those portions of legislation which are particularly hazardous to the public should be pointed out and that this matter be referred to the Legislative Committee for their information and appropriate action.

Nursing Practice Act Amendments

Dr. Wagner reviewed the Arizona State Nurses' Association paper dealing with the increasing of the registered nurses contribution to health care services, as written by Mrs. Hazel Bennett, Executive Director of the Arizona State Nurses' Association.

It was moved and carried that any consideration or revision of the Nurses Practice Act must assure that the physician remains legally, morally, and professionally responsible for practice of medicine; that this matter also be referred to the Legislative Committee.

Committee Resignation and Appointments

Dr. Grobe noted that Rudolf Kirschner, M.D., had submitted his resignation as Chairman of the Section on Allied Health.

It was moved and carried to accept Dr. Kirschner's resignation.

It was moved and carried that Charles D. Connor, M.D., be appointed as Chairman of the Section on Allied Health of the Professional Committee.

AMA DELEGATE'S REPORT

Dr. Cloud reported that the Clinical Meeting of the AMA will be held at the end of November in New Orleans and that the deadline for submitting resolutions to the AMA to be published in the Delegate's Handbook was October 15. Received.

COMMUNICATIONS

Dr. Grobe brought to the attention of the Board a letter received from the American Medical Association dated September 14, 1971, which read as follows:

"On June 1, 1971, you sent Mr. Harrison a copy of Arizona Medical Association, Inc., resolution No. 8-71, 'Part B Intermediary Letter No. 70-32 dated November, 1970' asking that it be routed to the proper department. The resolution calls for rescission of the Intermediary Letter and asks that this Association assist in this action.

Acknowledgement was not made at that time because of the closeness of this Association's Atlantic City meeting and the possibility that the same subject would arise there. As I am sure you are aware, four resolutions dealing with this general subject were introduced — Resolutions 40, 52, 53, and 96. Resolution 53 was adopted, and the remainder referred to the Council on Medical Service. (Copies attached.)

All these resolutions will be considered by the Council in its dealings with the Bureau of Health Insurance, and the Arizona resolution will also be brought to the Council's attention as a basis for its discussions." Received for information.

OTHER BUSINESS

Tax Exempt Status — Lobbying

Mr. Robinson reported on the fact that the IRS recently took action against the Maryland Association for Mental Health, Inc., because of participation in various lobbying activities. Following that he asked Edward Jacobson, legal counsel, to review this matter as it relates to the Arizona Medical Association. Mr. Jacobson reports that because the Arizona Medical Association, Inc., is organized under a different section of the Internal Revenue Code than that of the Maryland Association for Mental Health, Inc.; that there was no problem of our Association losing its tax exempt status because of lobbying activities. Received for information.

Travelers Program

Mr. Robinson reported that negotiations have been settled between the Travelers Insurance Companies and the O'Connor, Cavanagh, Anderson, Westover, Killingsworth & Beshears legal firm. He also reported that the program, as of September 17, 1971, had 939 participants with a premium generated of just under one million dollars; that additional physicians are signing up gradually as their existing policies terminate.

HEW Commission on Medical Malpractice

Dr. Jarret, a member of the Secretary of HEW's Commission on Medical Malpractice, reported on the activities of that Commission, including the fact that they are anticipating public hearings to be held in the months ahead. The first hearing will be held in Los Angeles on October 22 and 23, 1971. It is exceedingly important that organized medicine have representatives at the Commission hearings to represent medicine's views and sides of the matter.

It was moved and carried that this Association send both a physician and Mr. Harry Cavanagh to represent the Association at the hearings in Los Angeles October 22-23.

College of Medicine

Jack M. Layton, M.D., Dean of the College of Medicine, reported on the various activities going on at the school. He indicated that the new hospital has opened and is running a census of about fifty, that the school's budget was recently approved by the Regents and it did include funds for a Family Practice Program. He indicated that the formal dedication of the new hospital will be held on October 2 and all physicians are welcome and invited to attend. Received for information.

Meeting adjourned at 12:51 p.m.

Edward Sattenspiel, M.D.
Secretary

AD HOC COMMITTEE ON MEETING ARIZONA'S MEDICAL NEEDS

The meeting of the Ad Hoc Committee on Meeting Arizona's Medical Needs of the Arizona Medical Association, Inc., held Tuesday, October 5, 1971, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 7:10 p.m., Paul B. Jarrett, M.D., Chairman presiding.

BOARD OF DIRECTORS CHARGE TO THE COMMITTEE

Dr. Jarrett reviewed the charge to this committee

which reads "Identify and quantify the defects that may exist with respect to access to, and distribution of, health services. It should propose professional solutions to correct any deficiency noted."

THE ARIZONA PLAN FOR HEALTH SERVICES

Dr. Jarret introduced Mel Goodwin, Ph.D., Director, Arizona Health Planning Authority, who reviewed in-depth the origin of the State Health Planning Authority; the role of that Authority in the past, and the anticipated role of the Authority as it develops an Arizona Plan for Health Services, as dictated by the Arizona Legislature. Broad wide-ranging discussion ensued on both the Arizona Plan for Health Services and the charge to the committee. It was suggested that this committee might be more effective if they confined their efforts to subject of "medical" services as opposed to "health" services, as outlined in the original charge to the committee. The feeling being that the term "health" was certainly beyond the scope and abilities of the committee in the Arizona Medical Association. With regard to the various aims as set forth in the health plan, it was suggested that perhaps this Association's main effort should be kept to three areas; the first being manpower for health services, the second being the prevention and treatment of mental illness, and the third being the prevention and treatment of communicable diseases, and that for other portions of the plan we might offer advice or respond to requests for advice on the broader aspects of the health plan. There seemed to be general agreement that one of the prime areas of activity for this Association would be in the area of health manpower, both physician and otherwise.

Identity of Problems

Dr. Jarrett asked that the discussion be limited at this time to the identification of problems. Some of the problems mentioned were as follows: 1) lack of public health education programs; 2) the science-service gap that is the gap that exists between medical knowledge and the treatment of the patient; 3) the broad problem of manpower and placement of that manpower in areas of the state where the greatest need exists; 4) the provision of funds to accomplish solutions to the various identified problems; 5) the quantity, quality and location of health care facilities in Arizona; 6) the appropriateness of care which was tied in with the aspects of the influence of malpractice threats and peer review. The hour being late, it was determined to continue the exploration of these matters at a subsequent meeting.

OTHER BUSINESS

Mr. Robinson reviewed the request from the Region IX of the Department of Health, Education and Welfare for nominations of possible candidates for appointment to the Regional Health Advisory Committee of Region IX.

It was suggested that Daniel J. Potter, M.D., of Phoenix, be contacted to see it he would have objections to his name being submitted as a possible nominee.

Meeting adjourned at 10:12 p.m.

Edward Sattenspiel, M.D.
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Group or Individual-Family

State insurance law requires that groups be at least ten employees of the same employer or 25 or more participants of the same trade association. Usually a requirement is made that at least 70% to 80% of the group enroll to prevent selection of risk against the company. With these provisions, the group insurance can be issued to cover conditions from the time the insurance starts. While there may be some people needing health care at the time, others in the group will be good risks. The law of averages, rather than a selection of risk, therefore, protects the company.

On individual or family policies there is always a certain number of these people who only decide to obtain insurance at the time they are not feeling too well. Therefore, there is a certain risk selection against the insurance company to investigate and evaluate. Sometimes health information is not obtainable by the company particularly if the people did not answer the questions on the application honestly.

A company can't afford to pay for a long needed operation for someone who just took out insurance a few weeks or a few months ago. Otherwise, no one would need to take out insurance until they were ready to go to the hospital.

The company has the right (for three years) to further investigate at the time of a claim to see if the facts given them by the applicant for insurance were correct and if the cause of this sickness did commence after they had the policy. All policies of insurance are issued in consideration of the payment of the premium and of the application. If the application misrepresented or gave fraudulent information or lack of information, a contract of insurance did not exist and the company need merely refund the premium payment.

All health insurance issued by HBA is either Guaranteed Renewable for Life or to age 65 or eligibility for Medicare. In other words, the company cannot cancel the insurance or change the terms of the contract. It is, however, necessary that the people pay the premiums by the due date or within the grace period or they, themselves, cancel the contract.

When the premium payment for insurance is after the grace period, it is then subject to reinstatement. In other words, the applicant must reapply and the company must decide whether or not to again accept the risk. Here again the company has the right, during the contestable period, to rely upon the accuracy of the statements. Companies must realize that some people intending to drop a policy quit making premium payments and then if, a few months later, they are not feeling too well, decide maybe they better get their insurance back. To keep premium rates in line, the company must protect itself.

Some people take out individual or family policies because they are not eligible for group coverage. Others take it out and wish to have a guaranteed renewable policy so they will have insurance regardless of change of employment. This way they know they will always have coverage available whether they decide to go into business for themselves or accept other employment. Good individual and family health insurance is available to those in ordinary good health.

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Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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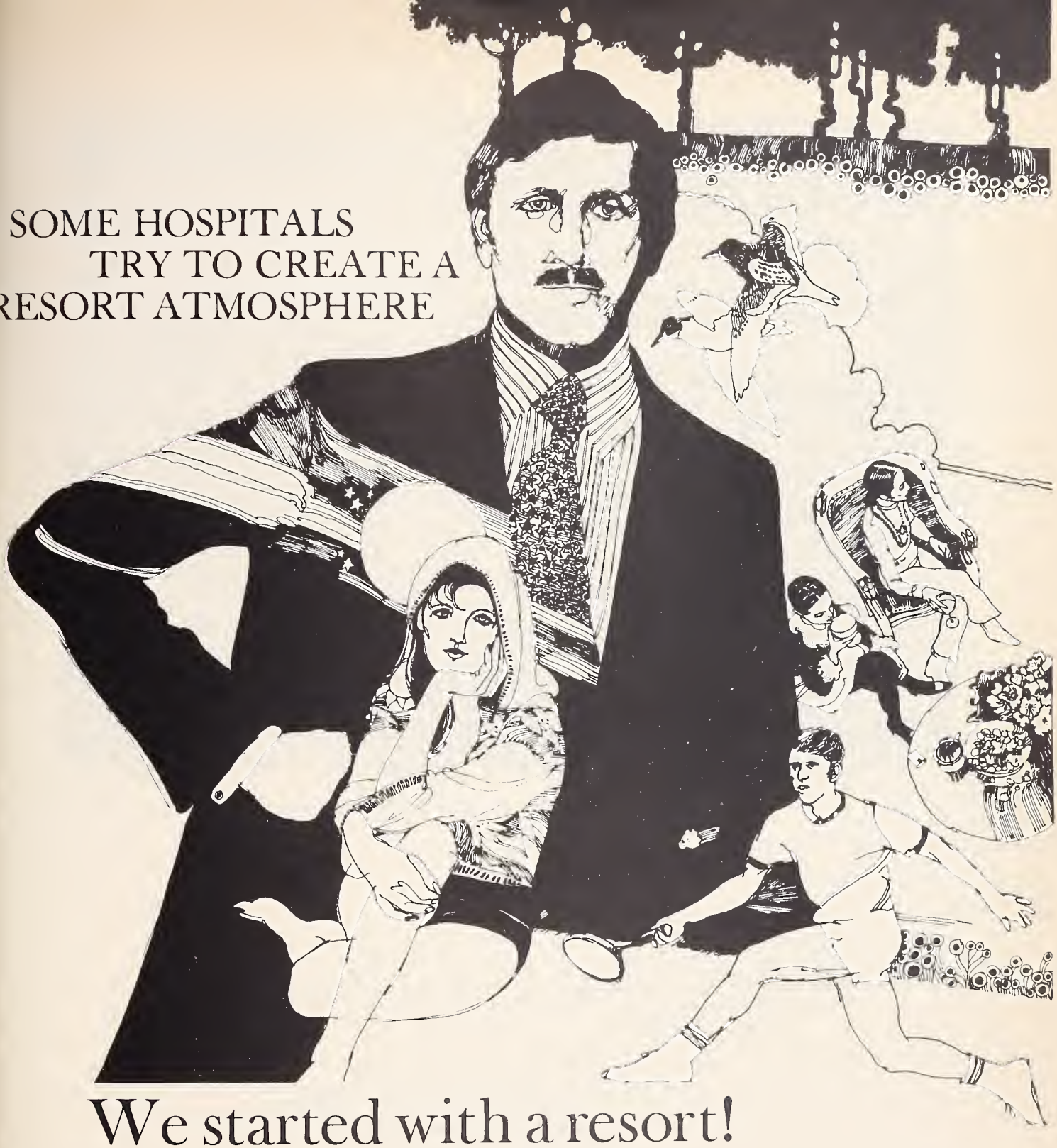
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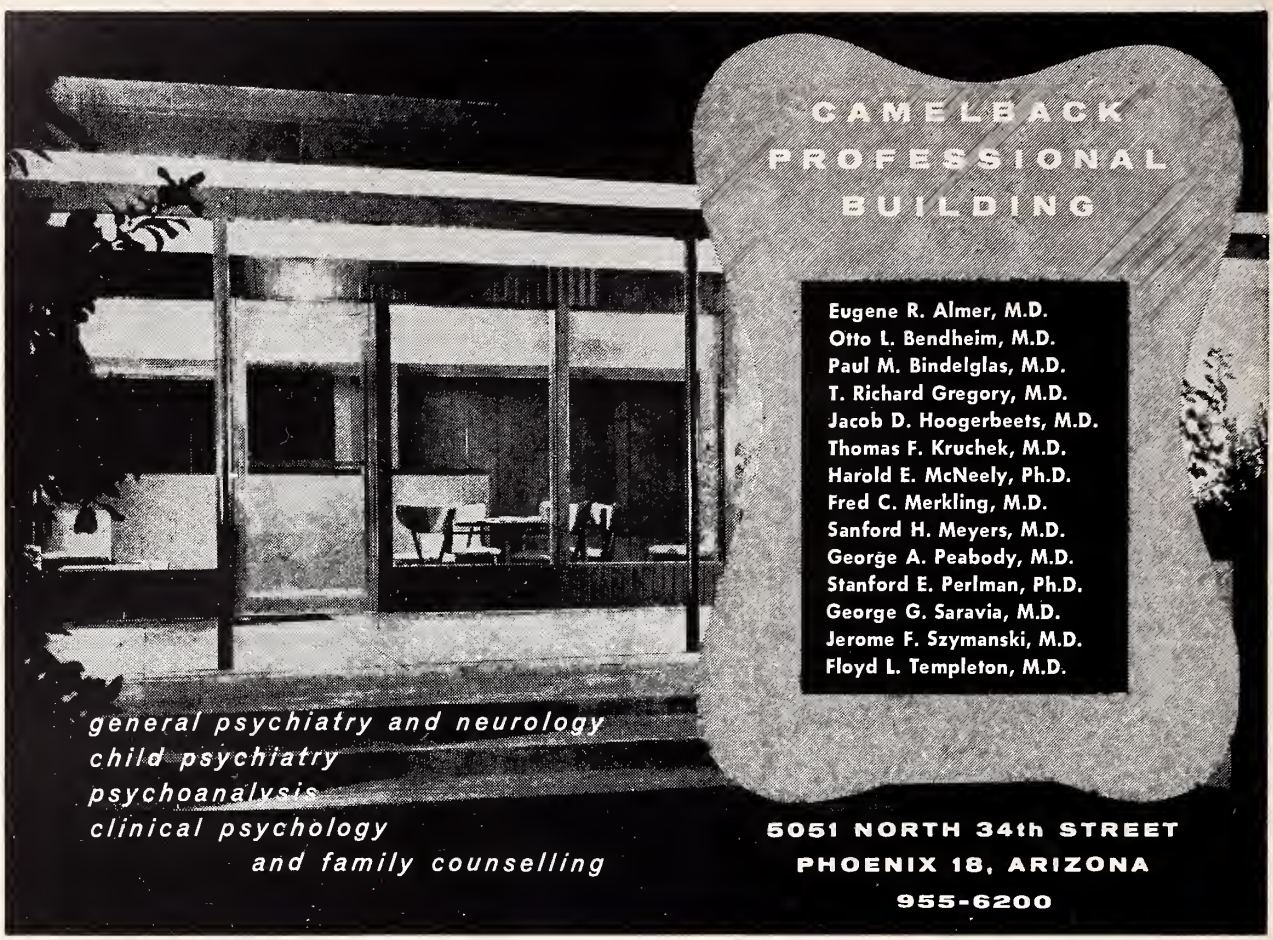
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Arizona Chapter — American Academy of Pediatrics

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PLACE: Maricopa County General Hospital, Phoenix

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Henry H. Work, Jr., M.D.
Professor of Psychiatry
UCLA Medical Center
Los Angeles, California

Clement E. Brooke, M.D.
Professor of Pediatrics
University of Missouri Medical Center

Fred Lipovitch, M.D.
Director, Mental Health Service
Arizona State University

Keith Perkins, Ph.D.
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FOR FURTHER INFORMATION: Write: Arizona Heart Association, 1720 E. McDowell Rd., Phoenix, Arizona 85006.

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December 3-4, 1971
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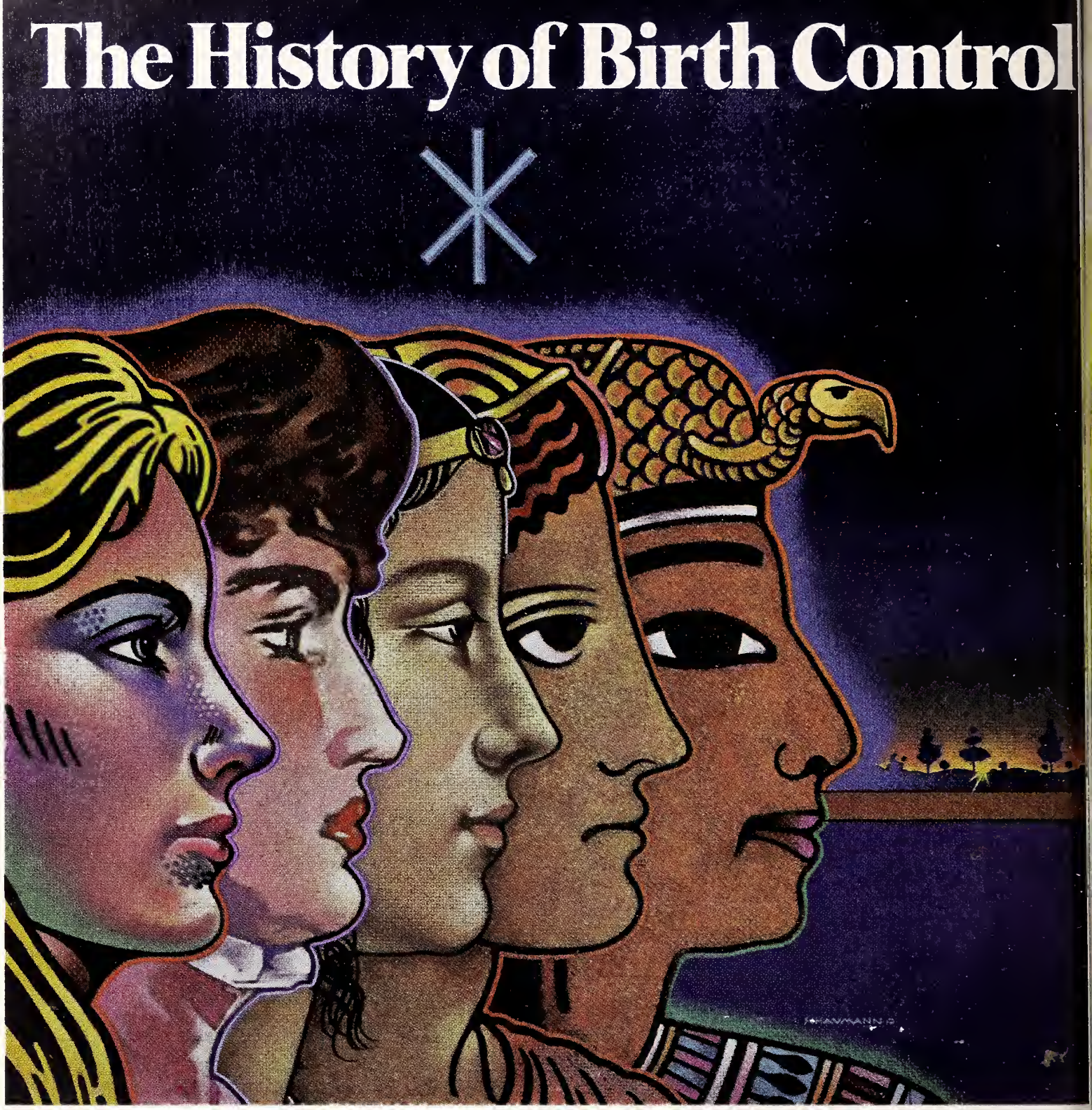
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It may seem now that such advances as oral contraception and the IUD have freed women from this often fruitless search and consequent suffering, but there are millions of women in the United States and elsewhere who have less knowledge of, and less recourse to, contraception than Egyptian women of the Twelfth Dynasty. Nothing is more urgent to all of us than to bring them help. We cannot long support the ecologic pressures of an additional 70 million Earth inhabitants each year.

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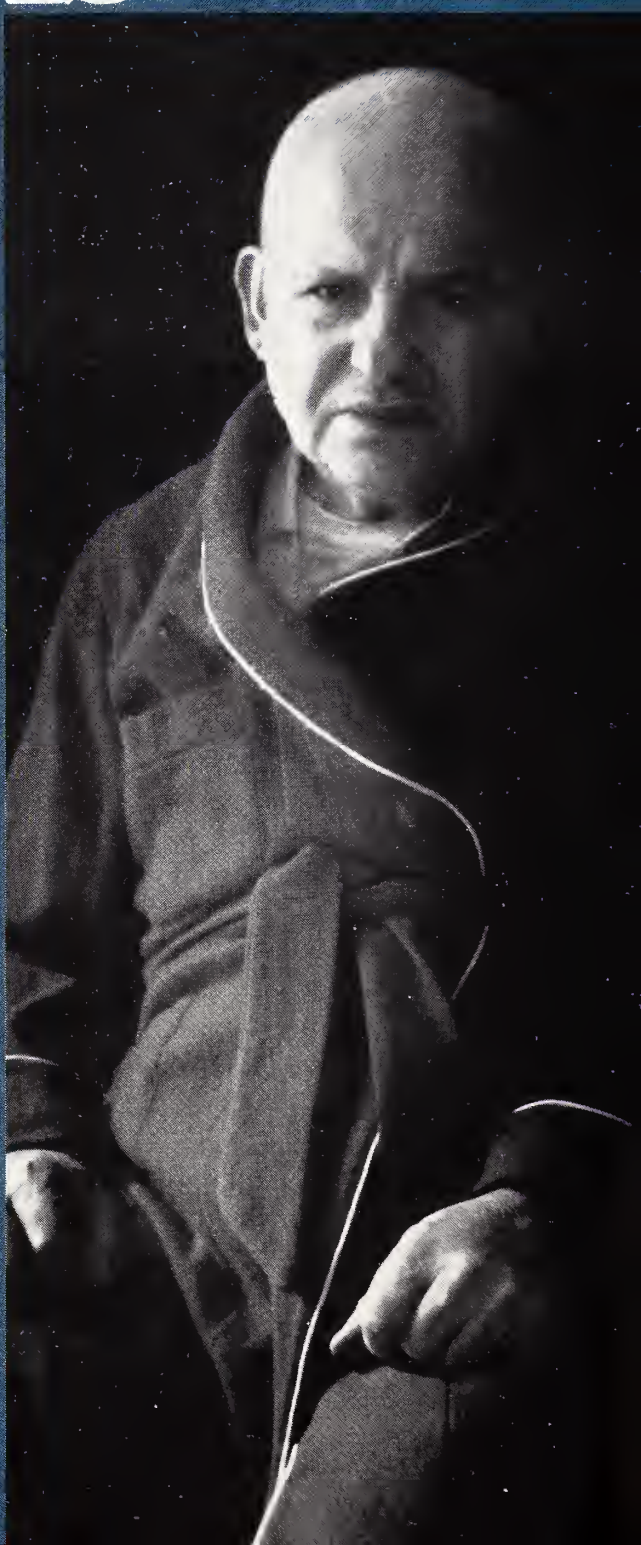


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Profile of insomnia

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Published monthly by The Arizona Medical Association, Inc., with offices at 810 W. Bethany Home Rd., Phoenix, Arizona 85013. Subscription $5 a year, single copy 50 cents. Second class postage paid at Phoenix, Arizona, and at additional mailing offices.

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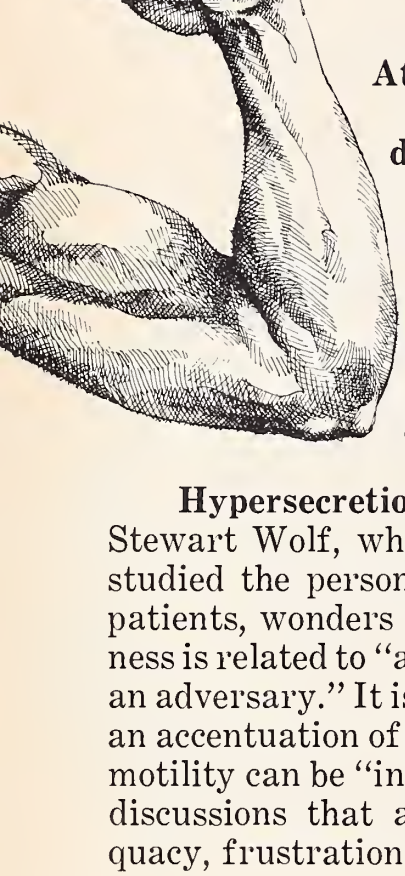
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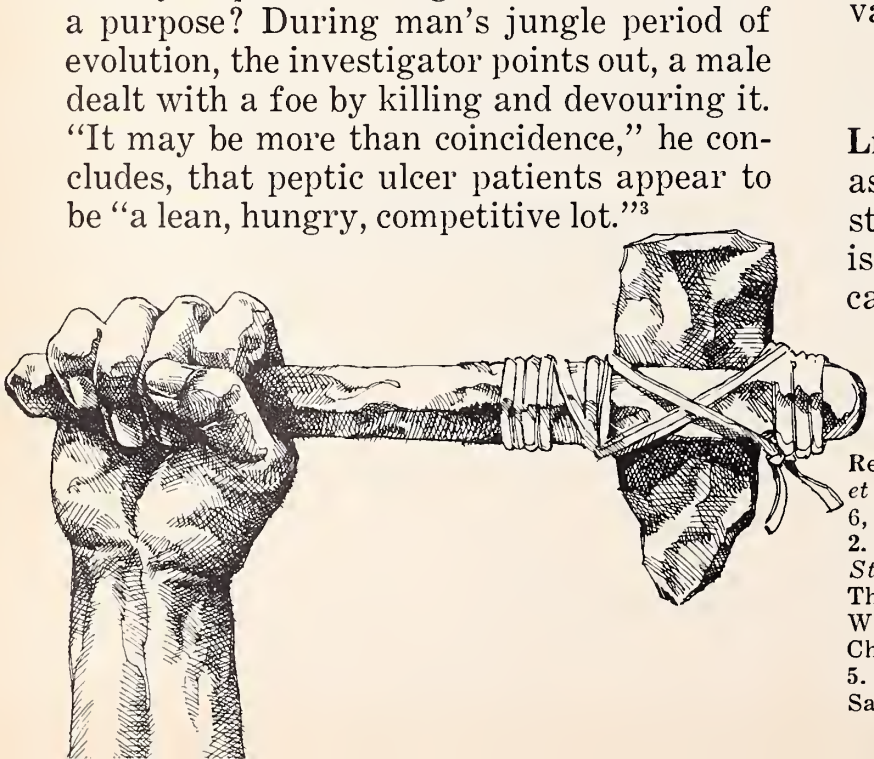
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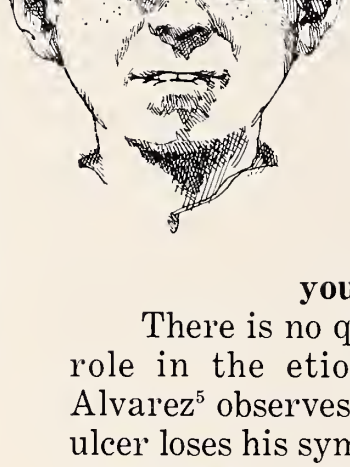
At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



Big boys don't cry. If more men cr maybe fewer would wind up with duode ulcers. But men will be men—the sum tota their genes and what t are taught. Schottsta observes that whe mother admonishes son who has hurt hims that big boys don't cry, is teaching h stoicism.[4] Crying is negation of everyth society thinks of as mar A boy starts defending manhood at an early a

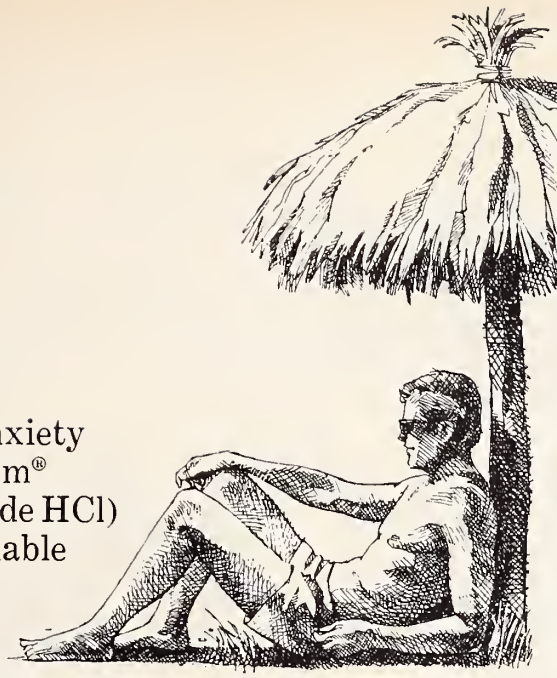


Take away stre you can take away sympto

There is no question that stress play role in the etiology of duodenal ulc Alvarez[5] observes that many a man with ulcer loses his symptoms the day he shuts the office and starts out on a vacation. T problem is, the type of man likely to have ulcer is the type least likely to take lo vacations or take it easy at work.

The rest cure vs. the two-way action Librax.® For most patients, the rest cure as unrealistic as it is desirable. Still, t stress factor must be dealt with. And he is where the dual action of adjunctive Libr can help. Librax is the only drug that co

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. *et al.* (eds.): *Harrison's Principles of Internal Medicine*, 6, New York, McGraw-Hill Book Company, 1970, p. 14 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wol Stress and Disease*, ed. 2, Springfield, Ill., Charles Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottsta W. W.: *Psychophysiologic Approach in Medical Pract* Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 1 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. Saunders Company, 1951, p. 384.



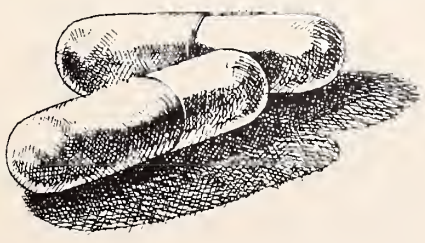
bines the antianxiety action of Librium® (chlordiazepoxide HCl) with the dependable antisecretory/ antispasmodic action of Quarzan® (clidinium Br).

Protects man from his own hungry personality. The action of Librium reduces anxiety—helps protect the vulnerable patient from the psychological overreaction to stress that clutches his stomach. At the same time, the action of Quarzan helps quiet the hyperactive gut, decreasing hypermotility and hypersecretion.

An inner healing environment with 1 or 2 capsules, 3 or 4 times daily. Of course, there's more to the treatment of duodenal ulcer than a prescription for Librax. The patient—with your guidance—will have to adjust to a different pattern of living if treatment is to succeed. During this adjustment period, 1 or 2 capsules of Librax 3 or 4 times daily can help establish a desirable environment for healing.

Librax: It can't change man's nature. But it can usually make it easier for men to cope with the discomfort of stress–both psychic and gastric—that can precipitate and exacerbate duodenal ulcer.

Librax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

in the treatment of duodenal ulcer

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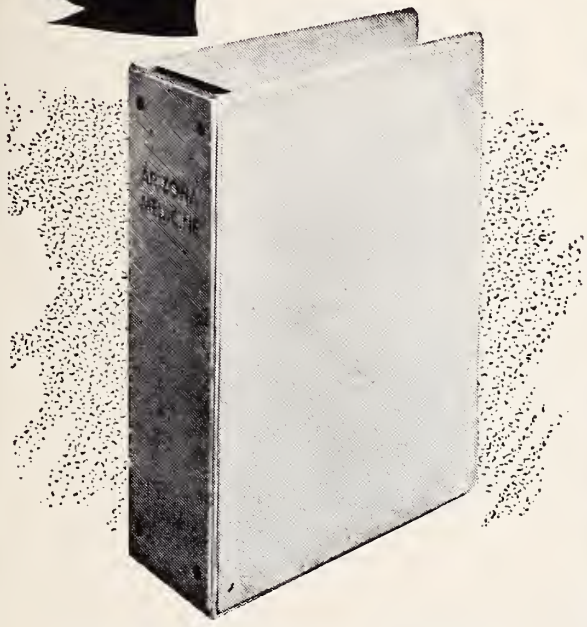
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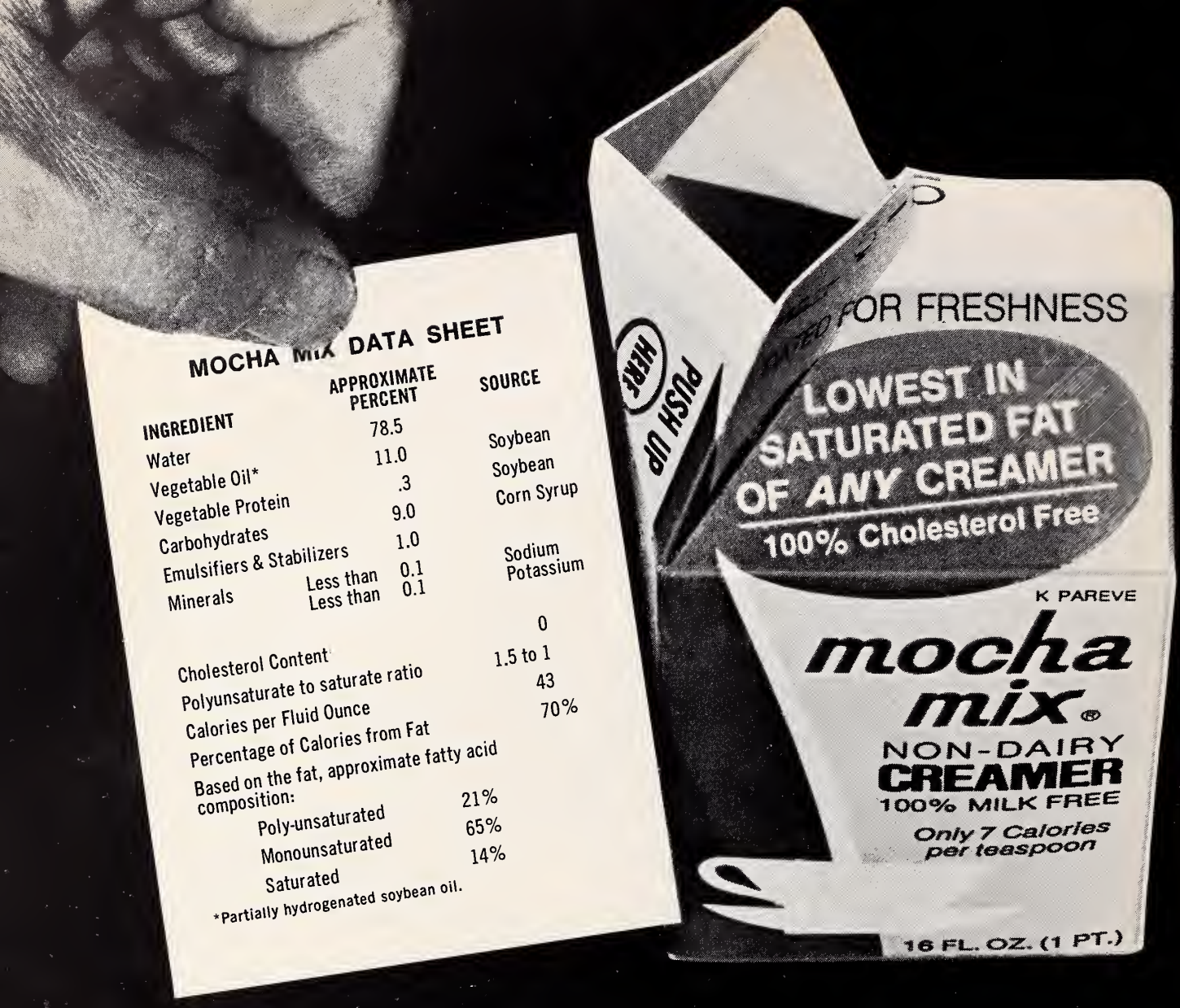
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References: **1.** Batterman, R. C., and Grossman, A. J.: Fed. Proc. *14*:316, 1955. **2.** Goodman, L. S., and Gilman, A., ed.: The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970. **3.** Vickers, F. N.: Gastroint. Endosc. *14*:94, 1967. **4.** Mielke, C. H., Jr., and Britten, A. F. H.: New Engl. J. Med. *282*:1270, 1970 (Corresp.). **5.** Kestler, O. C., and Gyurik, J.: Industr. Med. Surg. *21*:372, 1962. **6.** Forster, S., et al.: Amer. J. Orthop. *2*:285, 1960. **7.** Data on file, McNeil Laboratories, Inc. **8.** Friend, D. G.: Clin. Pharmacol. Ther. *5*:871, 1964.

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Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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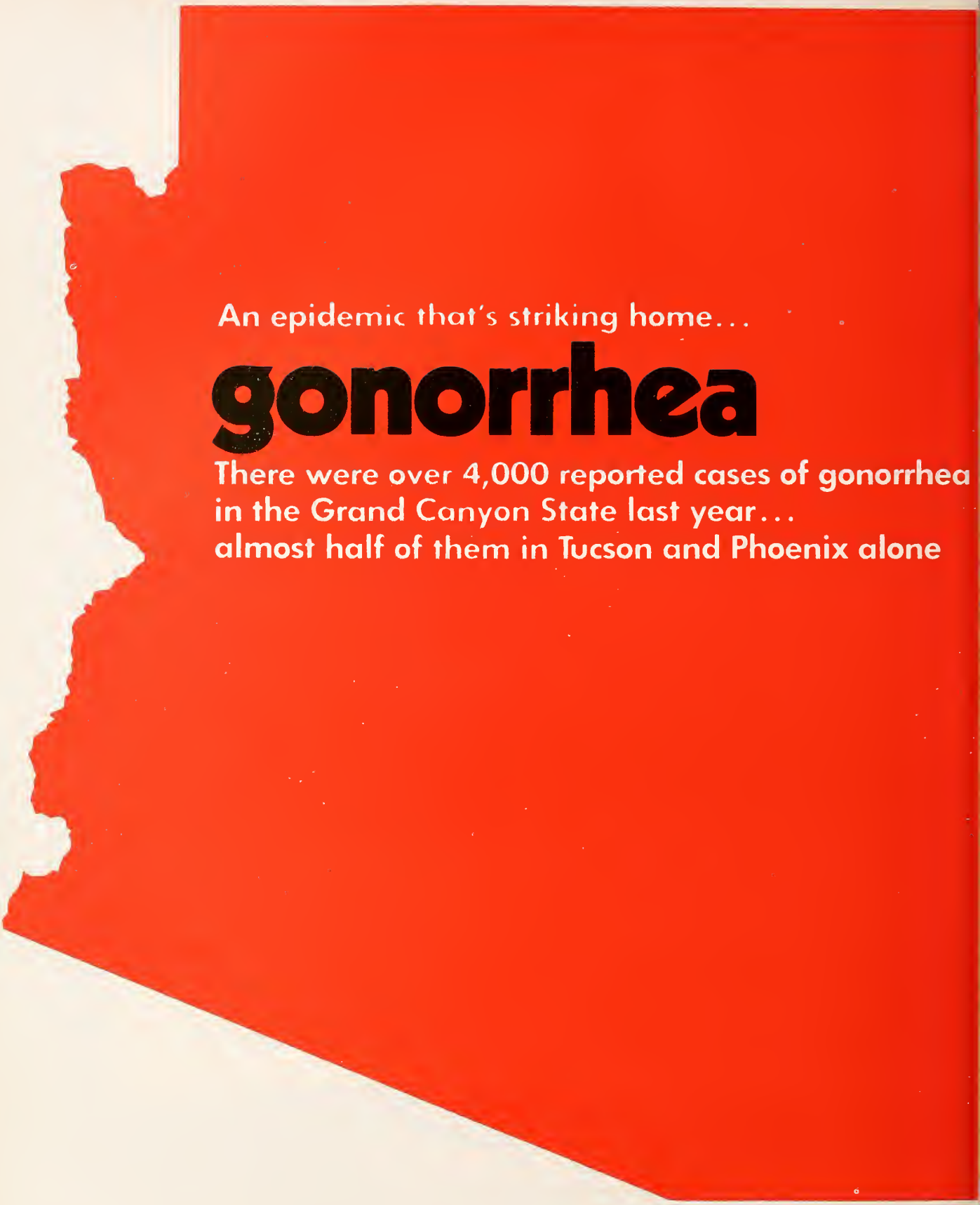
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single-dose treatment for intramuscular use only

a chemically distinct antibiotic indicated specifically for treatment of acute gonorrhea:
in the male–acute urethritis and proctitis
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when due to susceptible strains of *N. gonorrhoeae*

High cure rate:*96% of 571 males, 95% of 294 females
(Dosages, sites of infection, and criteria for diagnosis and cure are defined on page 3 of advertisement)

Assurance of a single-dose, physician-controlled treatment schedule

No allergic reactions occurred in patients with an alleged history of penicillin sensitivity when treated with Trobicin, although penicillin antibody studies were not performed

Active against most strains of Neisseria gonorrhoeae *in vitro*
(M.I.C. 7.5-20 mcg/ml)

A single two-gram injection produces peak serum concentrations averaging about 100 mcg/ml in one hour
(average serum concentrations of 15 mcg/ml present 8 hours after dosing)

NOTE: Antibiotics used in high doses for short periods of time to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Since the treatment of syphilis demands prolonged therapy with any effective antibiotic, and since Trobicin is not indicated in the treatment of syphilis, patients being treated for gonorrhea should be closely observed clinically. Monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected. Trobicin is contraindicated in patients previously found hypersensitive to it.

For full prescribing information, including contraindications, warnings and precautions, please see last page of this advertisement.

*Data compiled from reports of 14 investigators.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

Trobicin and the gonorrhea challeng

An accelerating epidemic— a decelerating susceptibility to penicillin

Gonorrhea is now the most prevalent reported communicable disease in the nation. The estimated number of new cases of gonorrhea in the United States exceeded two million for the first time in 1970. To compound the problems, strains of *N. gonorrhoeae* increasingly resistant to penicillin and other antibiotics are appearing throughout the country. Schedules of treatment which were effective only a few years ago now result in a significant percentage of treatment failure. *In vitro* studies have demonstrated that resistance of *N. gonorrhoeae* may also develop to Trobicin.

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Trobicin is indicated in the treatment of acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

High cure rates: 96% of 571 males, 95% of 294 females

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Trobicin is structurally not related to any other antil commonly used to treat gonorrhea.

The assurance of a single-dose, physician-controlled treatment schedule

Intramuscular injections should be made deep into the u outer quadrant of the gluteal muscle.

Adult male: Single 2 gram dose I.M. in acute gonor urethritis. Single 4 gram dose I.M. (should be divided bet two gluteal injection sites) in gonorrheal proctitis ar patients being re-treated after failure of previous antib therapy. In geographic areas where antibiotic resistar known to be prevalent, initial treatment with 4 grams i muscularly is preferred.

Adult female: Single 4 gram dose I.M. (should be divide tween two gluteal injection sites) in acute gonorrheal vicitis and proctitis.

Safety for use in pregnancy has not been established, no safety for use in infants and children.

Clinical Results with Single-Dose Treatment, Intramuscularly* (Data compiled from reports of 14 investigators**)

	Dosage	Number of Patients	Number Cured	Percent Cur
Adult Males: Gonorrheal urethritis	**2 grams** **4 grams**	**475** **96**	**457** **93**	**96%** **97%**
Adult Females: Gonorrheal cervicitis	**4 grams**	**294**	**280**	**95%**

Diagnosis was confirmed by cultural identification of *N. gonorrhoeae* on Thayer-Martin medium in all patients. Criteria for cure: negative culture after at least 2 days post-treatment in males and at least 7 days post-treatment in females. Any positive culture obtained post-treatment was considered evidence of treatment failure even though the follow-up period might have been less than the periods cited above under "criteria for cure" except when the investigator determined that reinfection through additional sexual contacts was likely. Such cases were judged to be reinfections rather than relapses or failures. These cases were regarded as non-evaluatable and were not included in the table above.

The following reactions were observed during the sir dose clinical trials: soreness at the injection site, urtic dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in no human volunteers, the following were noted: a decrea hemoglobin, hematocrit and creatinine clearance; elev of alkaline phosphatase, BUN and SGPT. In single and tiple-dose studies in normal volunteers, a reduction in output was noted. Extensive renal function studies der strated no consistent changes indicative of renal toxicity.

*4-gram doses were injected in two gluteol sites.

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a chemically distinct antibiotic indicated specifically for treatment of acute gonorrheal urethritis and proctitis in males and cervicitis and proctitis in females when due to susceptible strains of *N. gonorrhoeae*

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nomycin dihydrochloride penta-
e)—For Intramuscular injection:
ials containing 5 ml when reconsti-
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when reconstituted with diluent.

inocyclitol antibiotic active *in vitro*
t most strains of *Neisseria gonor-*
e (MIC 7.5 to 20 mcg/ml). Defini-
vitro studies have shown no cross
nce of *N. gonorrhoeae* between
in and penicillin.

ations: Acute gonorrheal urethri-
d proctitis in the male and acute
rheal cervicitis and proctitis in the
e when due to susceptible strains
gonorrhoeae.

aindications: Contraindicated in
ts previously found hypersensitive
bicin. Not indicated for the treat-
of syphilis.

ings: Antibiotics used to treat gon-
a may mask or delay the symp-
of incubating syphilis. Patients
d be carefully examined and
ly serological follow-up for at least
ths should be instituted if the diag-
of syphilis is suspected.

for use in infants, children and ant women has not been estab-

Precautions: The usual precautions should be observed with atopic individuals. Clinical effectiveness should be monitored to detect evidence of development of resistance of *N. gonorrhoeae.*

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25°C and use within 24 hours after reconstitution with diluent.

Male—single 2 gram dose (5 ml) intramuscularly. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.

Female— single 4 gram dose (10 ml) intramuscularly.

How supplied: *Vials, 2 and 4 grams —with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9%* w/v. Reconstitution yields 5 and 10 ml respectively with a concentration of spectinomycin dihydrochloride pentahydrate equivalent to 400 mg spectinomycin per ml. For intramuscular use only.

Susceptibility Powder—for testing *in vitro* susceptibility of *N. gonorrhoeae.*

Human pharmacology: Rapidly absorbed after intramuscular injection. A two-gram injection produces peak serum concentrations averaging about 100 mcg/ml at one hour with 15 mcg/ml at 8 hours. A four-gram injection produces peak serum concentrations averaging 160 mcg/ml at two hours with 31 mcg/ml at 8 hours.

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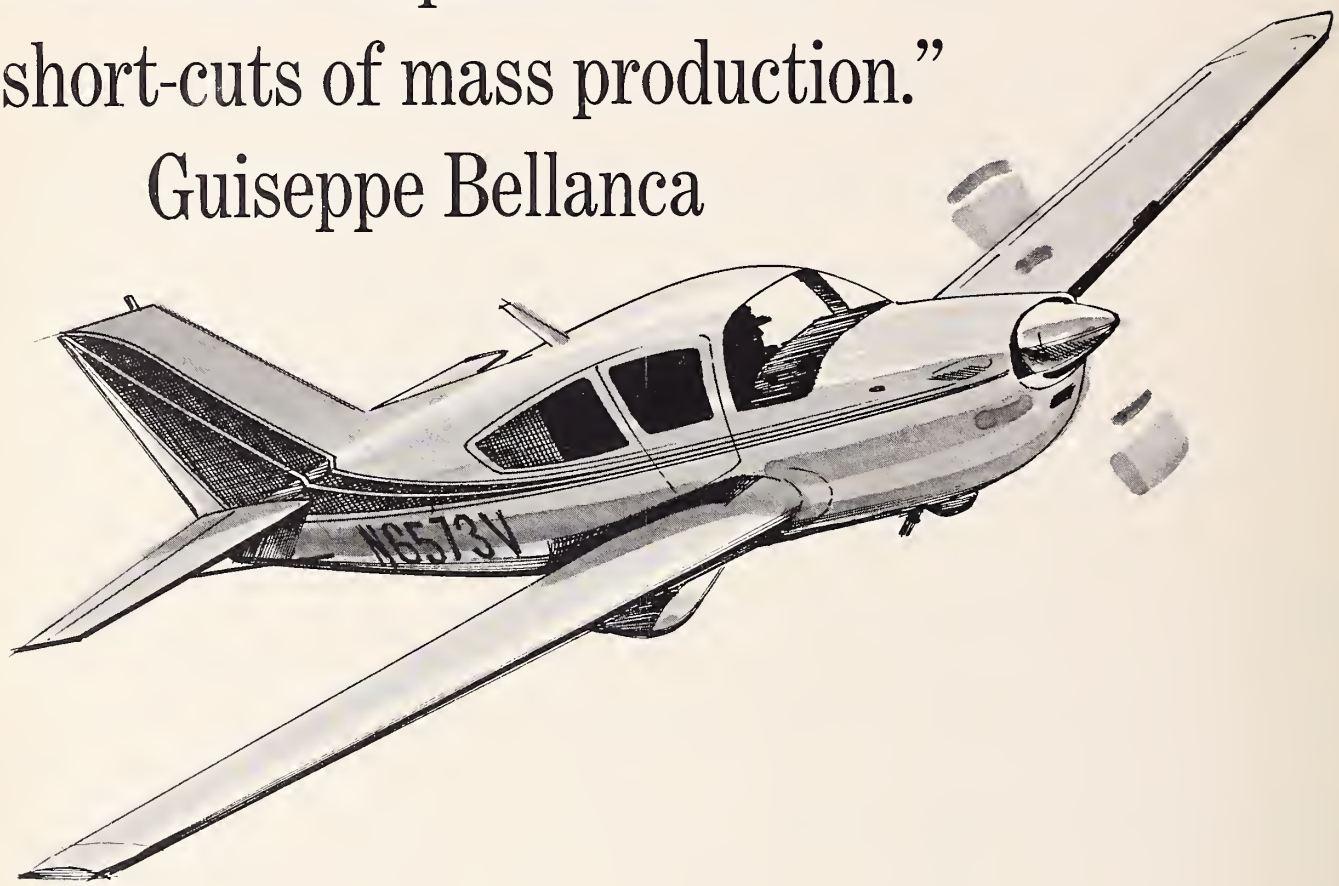
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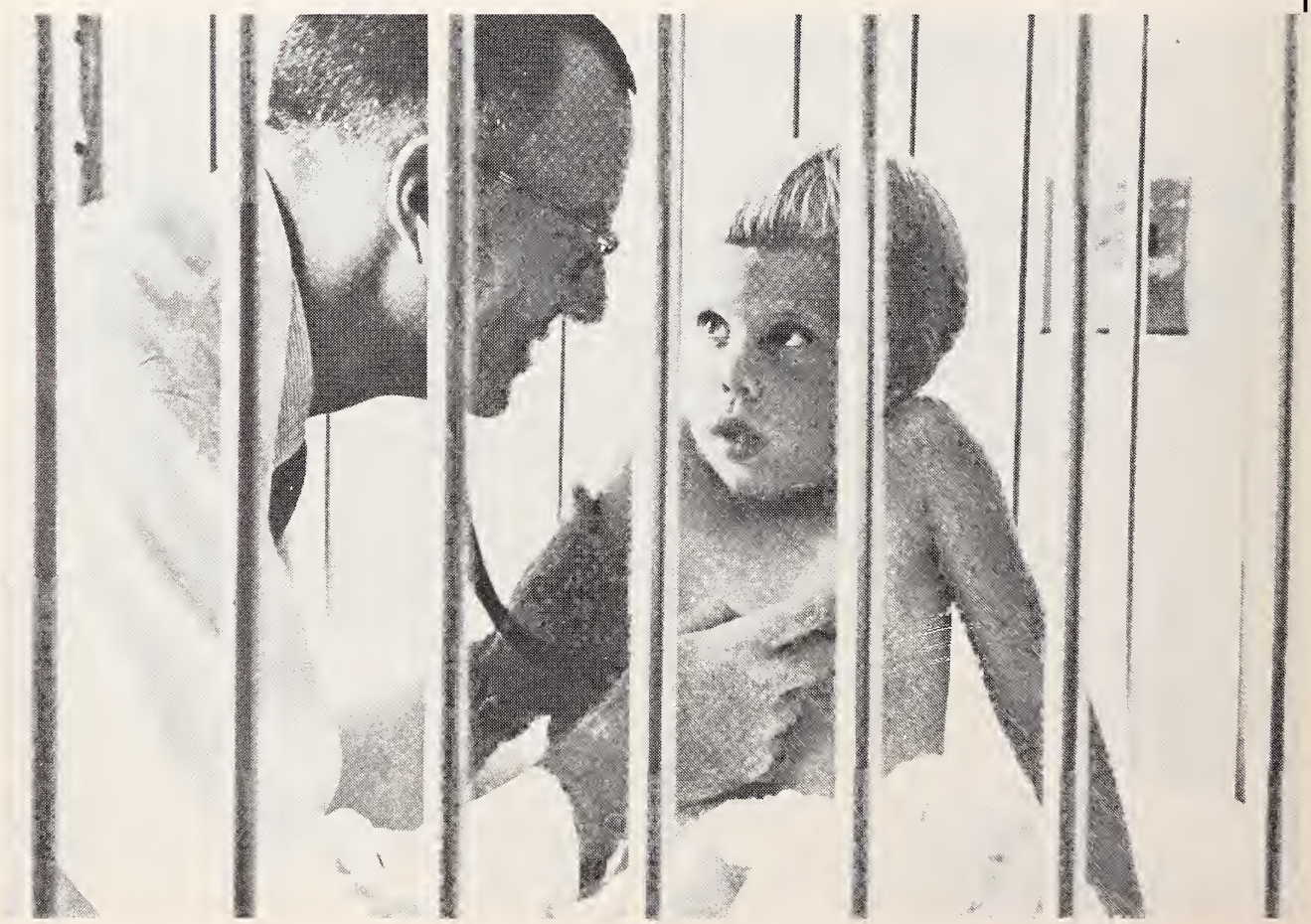
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SYNTHROID® (sodium levothyroxine) is pure synthetic T_4, the major circulating thyroid hormone. It is reliable to use because of its affinity for protein-binding sites in the blood. T_3 is more fickle. Sometimes it binds. Sometimes it doesn't. T_4 more *predictably* binds to protein.

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ALL THYROID-FUNCTION TESTS ARE USEFUL IN MONITORING SYNTHROID THERAPY.

No calculations are needed, test interpretation is simple.

Any of the commonly used T_4 thyroid function tests (P.B.I., T_4 By Column, Murphy-Pattee, Free Thyroxine) are useful in monitoring patients on T_4 because they *all* measure T_4. Patients on SYNTHROID are thereby easy to monitor because their results will fall within predictable, elevated test ranges. Of course, clinical assessment is the best criterion of the thyroid status of the drug-treated patient.

TWO GOOD REASONS WHY THE ROAD TO NORMALIZED THYROID STATUS IS SO SMOOTH FOR THE SYNTHROID PATIENT.

(1) The onset of action of T_4 is gradual. It has a long in vivo "half-life" of over six days. (Occasional missed doses or accidental double-doses are of le concern because of this factor)[1]; (2) since SYNTHROID contains or T_4, the potential for metabolic surges traceable to more potent iodides (T_3) is eliminated.

1. Latiolais, C. J., and Berry, C. C.: Misuse of Prescription Medications by Outpatients, *Drug Intelligence & Clin. Pharm.* 3:270-7, 196

TEST	HYPOTHYROID	SYNTHROID THERAPEUTIC NORMAL
P.B.I.	Less than 4 mcg %	6-10 mcg %
T_4 By Column	Less than 3 mcg %	7-9 mcg %
T_3 (Resin)	Less than 25%	27-35%
T_3 (Red Cell)	Less than 11%	11.5-18%
Free Thyroxine	Less than 0.7 nanograms %	0.7-2.5 nanograms %
Murphy-Pattee	Less than 2.9 mcg %	4-11 mcg %

Choose the Smooth Road ...to thyroid replacement therapy







?HY DOES SYNTHROID OST LESS THAN YNTHETIC DRUGS ONTAINING T_3?

ery simple. T_3 costs more to make nthetically than does T_4. So it is onomically necessary for a nthetic thyroid medication ntaining T_3 to cost more than ie containing T_4 alone. Synthetic mbinations cost patients nearly % more than SYNTHROID[3] cause the T_3 costs more to start th; also there is the additional pense of formulating a tablet ntaining two active ingredients.

American Druggist BLUEBOOK, March, 1971.

KNOWLEDGE OF THE '70's CHALLENGES CUSTOMS CONCERNING DESICCATED THYROID DRUGS.

In the past, desiccated thyroid produced from animal glands was considered "good, and cheap." We now know that improved products are available and the price difference has narrowed to the point of being inconsequential. (SYNTHROID, for instance, costs patients about a penny a day more than brands of desiccated thyroid.)

What does this additional $3.65 a year buy the patient? Quite a bit in terms of quality, reliability and service.

SWITCHING PATIENTS TO SYNTHROID IS EASY.

Switching present patients to SYNTHROID (or starting new ones) is a simple matter. SYNTHROID is available in the widest range of dosage strengths of any thyroid drug. Seven scored, color-coded tablet strengths are available plus a lyophilized injectable form for emergency or postoperative uses.

RESPONSE, RELIABILITY, SERVICE—COMPARISON OF FIVE PARAMETERS

PARAMETERS	DESICCATED THYROID U.S.P.	SYNTHROID® (sodium levothyroxine)
SOURCE OF HORMONE	Animal glands (swine, sheep, cows). Hormone content of glands and ratio of T_3-T_4 varies by type of animal, season in which gland is harvested, and diet of animal.[1,2,3,4,5]	Synthetically derived pure crystalline hormone. Because no animal protein is present, no objectionable odor occurs upon aging.
GENERAL ASSAY TECHNIQUE	"Its major disadvantage is inadequate standardization of hormonal content."[8]	Unlike desiccated thyroid U.S.P., thyroxine does not require biologic standardization to establish its potency.[2,6] Crystalline T_4 is used. Purity is verified by paper chromatography. Content of tablets is standardized by weight.
CLINICAL RESPONSE	"T_3 and T_4 ratio varies according to gland source. Fluctuations in response can occur. Potency can vary."[3]	"Sodium levothyroxine has been extensively used with satisfaction and is widely held to be superior to (desiccated) thyroid."[7] "There are well documented examples of patients who failed to respond satisfactorily to desiccated thyroid but subsequently responded to (sodium-1) thyroxine."[4]
PREDICTABILITY	Failure of thyroid U.S.P. treated patients to show clinical improvement and/or lack of correlation in clinical findings to thyroid function test results has been frequently discussed in the literature.[8,9,10,11,12,13,14,15,16] Regardless of which factor or factors accounts for this phenomenon the fact remains that discrepancies do occur.	Test results predictably elevated. ". . . oral potency of this material is attested to by a uniformly good clinical response corroborated by a prompt and sustained increase in the serum PBI levels."[16]

1. Mangieri, C. N. and Lund, M. H.: Potency of United States Pharmacopeia desiccated thyroid tablets as determined by the antigoitrogenic assay in rats, J. Clin. Endocrinol. Metab., *30*:102-4, 1970.
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9. Braverman, L. E. and Ingbar, S. H.: Anomalous effects of certain preparations of desiccated thyroid on serum protein-bound iodine, New Eng. J. Med., *270*:439-42, 1964.
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See next pages for prescribing information.







PATIENTS CAN BE SUCCESSFULLY MAINTAINED ON A DRUG CONTAINING THYROXINE ALONE.

Thyroxine (T_4) is, as you know, the major circulating hormone produced by the thyroid gland. T_3 is also produced, in smaller amounts, and is active at the cellular level. For years it has been a working hypothesis among endocrinologists that T_4 is converted by the body to T_3. In 1970 this process, called "deiodination," was demonstrated by Sterling and Braverman[2]. T_4 does convert to T_3, though the precise quantities are still being studied.

The conversion has been clinically demonstrated during the administration of T_4 to athyrotic patients. Their thyroid status is normalized on SYNTHROID alone, yet the presence of T_3 in these patients has been clearly shown.

CONSIDERATE LONG-TERM THERAPY FOR THE PATIENT.

Predictable patient response, of course, is more important than price. You do get complete clinical response with the single-entity synthetic, SYNTHROID. And, at a reasonable cost to the patient. In some short term situations, T_3 drugs can be useful but, in long term therapy, the smooth road provided by SYNTHROID may be the better route.

SYNTHROID, with its smooth road to complete thyroid replacement therapy, has been selected for more patients in the United States and Canada than any other brand of thyroid medication.

2. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine (T4) to Triiodothyronine (T3) in Athyreotic Human Subjects, *J. Clin. Invest.* 49:855-64, 1970.

AS WITH ANY THYROID PREPARATION, CAUTIOUS OBSERVATION OF THE PATIENT DURING THE BEGINNING OF THERAPY WILL ALERT THE PHYSICIAN TO ANY UNTOWARD EFFECTS.

Side effects, when they do occur, are related to excessive dosage. Caution should be exercised in administering the drug to patients with cardiovascular disease. Read the accompanying prescribing information for additional data or write Flint Laboratories.

Choose the Smooth Road ...to thyroid replacement therapy



0.05 mg. 0.1 mg. 0.15 mg. 0.2 mg.

FREE TAB-MINDER medication dispensers—color-coded in 4 dosage strengths—get patients off to a good start and encourage regular habit patterns. Contain free 4-weeks' supply of SYNTHROID and are reusable for maintenance dosage.

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CYTOMEL (Sodium liothyronine) Synthetic T_3	EUTHROID** (Liotrix) Synthetic T_3-T_4	THYROLAR*** (Liotrix) Synthetic T_3-T_4	Desiccated (Thyroid, USP) Cow, sheep or hog thyroid	PROLOID (thyroglobulin) Frozen hog thyroid	SYNTHROID (Sodium levothyroxine) Synthetic T_4
Unscored 5 mcg.	N.A.	N.A.	unscored ¼ gr.	¼ gr.	0.025 mg.
N.A.	½	½	unscored ½ gr.	½ gr.	0.05 mg.
25 mcg.	1	1	unscored 1 gr.	1 gr.	0.1 mg.
N.A.	N.A.	N.A.	N.A.	1½ gr.	0.15 mg.
50 mcg.	2	2	unscored 2 gr.	2 gr.	0.2 mg.
N.A.	3	3	unscored 3 gr.	3 gr.	0.3 mg.
N.A.	N.A.	N.A.	unscored 5 gr.	5 gr.	0.5 mg.
N.A.	N.A.	N.A.	N.A.	N.A.	Injectable 500 mcg.

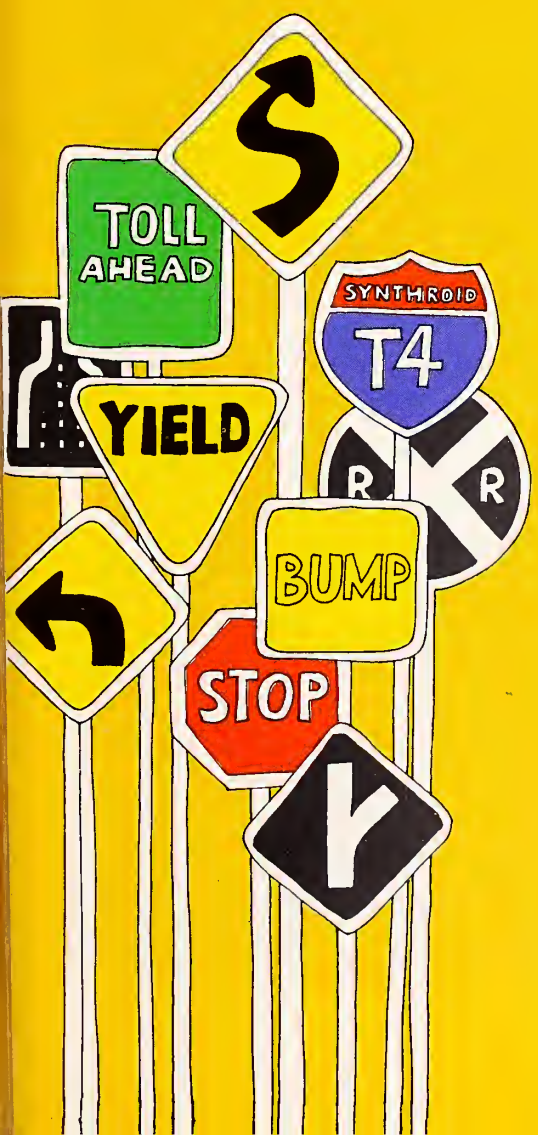
N.A. = Not Available Commercially

*Equivalents shown are chemical, and do not take into consideration individual patient variables. Clinical effect is approximate and should be monitored when converting a patient to SYNTHROID. This is particularly important in patients previously on desiccated thyroid. In these patients, lower doses of SYNTHROID may produce the same metabolic effect.

**Euthroid (#1 tablet) contains 60 mcg. of T_4 and 15 mcg. of T_3.

***Thyrolar (#1 tablet) contains 50 mcg. of T_4 and 12.5 mcg. of T_3.

Synthroid®
(sodium levothyroxine)



Indications: SYNTHROID (sodium levothyroxine) is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. Indications for SYNTHROID (sodium levothyroxine) **Tablets** include myxedema, hypothyroidism without myxedema, hypothyroidism in pregnancy, pediatric and geriatric hypothyroidism, hypopituitary hypothyroidism, simple (nontoxic) goiter, and reproductive disorders associated with hypothyroidism. SYNTHROID (sodium levothyroxine) **for Injection** is indicated for intravenous use in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. The injection is also indicated for intramuscular use in cases where the oral route is suspect or contraindicated due to existing conditions or to absorption defects, and when a rapid onset of effect is not desired.

Precautions: As with other thyroid preparations, an overdosage may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

Contraindications: Thyrotoxicosis, acute myocardial infarction. **Side effects:** The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they do occur, are secondary to increased rates of body metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.

In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.

Dosage and Administration: The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose, preferably after breakfast. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) **for Injection** may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

THE FACTS ARE CLEAR AND HERE IS OUR OFFER.

Synthetic thyroid drugs are an improvement over animal gland products. Patients, even athyrotic ones, can be completely maintained on SYNTHROID (T_4) alone. Thyroid function tests are easy to interpret since they are *predictably* elevated when the patient adheres to SYNTHROID. Of all synthetic thyroid drugs, SYNTHROID is the most economical to the patient.

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Free TAB-MINDER medication dispensers to start or convert all your hypothyroid patients to SYNTHROID. Free information to physicians on role of thyroid function tests in a new booklet titled: "Guideposts to Thyroid Therapy." Ask us.

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Two dosage strengths– 125 mg./5 ml. and 250 mg./5 ml.

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MEDICAL MANAGEMENT OF DRUG ADDICTION



ALFRED S. NELSON, M.D.

To meet the anticipated rising demands on them to treat abuse of illegal drugs and related medical disordrs, physicians will need knowledge of pertinent aspects including drug tolerance, emotional dependence, ennervated motivation, sharing by drug users of cotaminated injection equipment and the constipating effects of opiates. This article presents the essence of the author's extensive experience with drug abusers in the Lexington (Kentucky), Clinical Research Center, and includes diagnostically useful signs and practical therapeutic approaches.

The author has been chief of the Medical Service at the NIMH Clinical Research Center, Lexington, Kentucky, where the observations for this manuscript were made, since July 1, 1964. He has also served on the volunteer faculty of the University of Kentucky Medical Center as an Associate Clinical Professor of Medicine. Since June 13, 1971 he has been assigned as Deputy Chief of the Medical Service at the Phoenix Indian Medical Center in Phoenix, Arizona. He is a Medical Director in the U. S. Public Health Service. He is a diplomat of the American Board of Internal Medicine and a member of the American College of Physicians.

Synopsis — Abstract

Physicians will be increasingly expected to treat the medical problems of drug addicts, who are disease-prone individuals. Substitution therapy for opiates can be carried out relatively easily using methadone in relatively low dosage after symptoms of physical dependence appear. It can be accomplished in about a week. Substitution therapy for sedatives is a difficult problem. Pentobarbital is the drug of choice. The amount needed can be roughly estimated by giving the patient 200 mg of pentobarbital q2h until symptoms of mild toxicity appear. After determining the initial daily need to prevent symptoms of physical dependence, the daily dose is decreased by about 100 mg daily. Diphenylhydantoin is not considered helpful in preventing withdrawal seizures.

Factors responsible for the medical problems seen in addicts include the phenomena of tolerance, physical and emotional dependence, the use of "black market" drugs, lack of sterile technique and sharing of injection equipment, depression of central nervous centers, constipating effects of opiates, and lack of motivation to be productive members of society.

INTRODUCTION

Drug addiction has attracted a great deal of attention in recent years, and considerable emphasis has been placed on the sociological, psychological and legal aspects. Local communities have been stimulated to develop their own facilities for treating addicts since the passage of the Narcotic Addict Rehabilitation Act of 1966 (NARA), and the federal centers have been phasing out their medical treatment facilities. Physicians in local communities are increasingly being called upon to treat addicts. Many physicians feel uncomfortable in treating addicts as many of them have not been trained in handling addicts, and they are not familiar with the management of some of the medical problems that are commonly associated with drug addiction.

Addicts are disease-prone individuals. The incidence of physical and psychophysiological disease is high among them.[1] They are difficult patients and physicians often try to avoid them. They neglect their physical needs, often fail to follow the advice of their physicians, tend to be argumentative and often antagonize those who are trying to help them. Many are con artists who often succeed in getting their physicians to prescribe drugs they would be better off without.

Excessive and prolonged use of opiates or sedatives leads to physical dependence or addiction. Abuse of other mind altering drugs such as the stimulants (caffeine, cocaine, amphetamines and others) or the hallucinogens (LSD, marijuana, peyote, STP, DMT and others) leads to psychological dependence and much harm can result, but physical dependence, that is objectiively measurable, has not been found to develop from their abuse, with the possible exception of the amphetamines. Tolerance does develop rapidly to amphetamines, and, after prolonged bouts of heavy usage, withdrawal symptoms of somnolence, muscle aches, ravenous hunger and apathy have been described.[2] Substitution therapy has not been found necessary in order to withdraw stimulants or hallucinogens from those who have become psychologically dependent on them.

The purpose of this report is to discuss substitution therapy during withdrawal from opiates and sedatives, the medical disorders that drug addicts are particularly subject to, and the medical management of these disorders where indicated.

SUBSTITUTION THERAPY DURING WITHDRAWAL FROM OPIATES

Such therapy may be indicated when individuals have taken 80 mg. or more of morphine daily for a month or equivalent doses of other opiates. One mg. of methadone is roughly equivalent to

1 mg. heroin, 3 mg. morphine, 30 mg. codeine, 20 mg. meperidine, ½ mg. dilaudid and 4 mg. pantopon. When the addicting opiate is withdrawn, a characteristic abstinence syndrome develops. It develops about eight hours after withdrawal of short-acting opiates, such as heroin or dilaudid, becomes maximal at 24 hours, and subsides in about five days. It somewhat resembles an acute flu syndrome. About 10 to 16 hours after the last dose of morphine, to which the individual is addicted, restlessness and yawning occur followed by excessive lacrimation, rhinorrhea and perspiration. The pupils become dilated and react sluggishly to light and gooseflesh may be evident. The blood pressure, pulse and respiratory rates may be slightly elevated and muscular aching and twitching may occur. Late manifestations may include nausea, vomiting, diarrhea, chills and fever.

Withdrawal from opiates is usually relatively easy to accomplish. Reassurance and mild sedation will suffice for those with mild habits. Methadone is the drug of choice when the substitution therapy is needed. It is effective orally, has a long, smooth action, and its own withdrawal effects are gradual and moderate. Five to 15 mg. is given per dose depending on the severity of the signs. It is given two to four times a day. Up to 60 mg. per day may be needed for severe cases. Generally 40 mg. is sufficient during the first day, after withdrawal signs have been shown to be present. The dose may be decreased 5 to 10 mg. per day. Substitution therapy can usually be completed in five to seven days, except in the case of methadone addiction, where abstinence phenomena, though milder, may be protracted for about two weeks. Chronic abstinence phenomena, such as restlessness and irritability, may persist for a few months. Withdrawal can be quite difficult in the presence of an associated acute illness. It may be necessary to administer methadone parenterally and to give parenteral fluids in the presence of vomiting or severe diarrhea. Occasionally addicts go through the withdrawal period without any substitution therapy — the "cold turkey" treatment. So long as their addiction is limited to opiates and they do not have a serious associated disease, they generally come through the ordeal without serious complications. They do not develop convulsions, delirium or psychosis from opiate withdrawal alone.

WITHDRAWAL FROM BARBITURATES AND OTHER SEDATIVES

Physical dependence occurs when 400 mg. or more of pentobarbital or its equivalent is used daily for a month. Other barbiturates, alcohol, chloral hydrate, paraldehye, meprobamate, glutethamide, methyprylon, ethchlorvinal, chlordiazepoxide, diazepam and similar sedatives when abused may give rise to this variety of physical dependence. When such drugs are discontinued, a very serious abstinence syndrome may develop. Less severe symptoms and signs include restlessness, tremor, tachycardia, insomnia, hyperreflexia and a pulse rise of greater than 15 per minute when changing from the sitting to the standing position. Severe manifestations may include convulsions, delerium and psychosis. It is essential to use substitution therapy during withdrawal from these drugs. The drug of choice for this purpose is pentobarbital, although other members of this group may occasionally be preferred, such as paraldehyde, chlordiazepoxide or diazepam.

If one could be sure of the daily amount and kind of the abused sedative, one could merely start with that amount or about 10 per cent less and slowly decrease the total each day by about 100 mg. if a barbiturate or comparable amount of other drugs. However, it is usually not possible to obtain a history that is reliable, and often multiple sedative drugs as well as other drugs have been abused. Therefore, it is useful to test the patient's tolerance to pentobarbital. This is often very difficult to do, and one must realize that only a rough estimate can be made. Frequent adjustments must be made to avoid excessive intoxication or serious withdrawal manifestations. It is advisable to give the test dose when the patient is showing neither withdrawal signs nor intoxication. The patient is given 200 mg. pentobarbital by mouth and examined 1½ to 2 hours later for signs of intoxication. These include drowsiness, nystagmus, slurred speech and ataxic gait. Horizontal nystagmus is an early sign, while vertical nystagmus develops later.

If the patient shows no tolerance to 200 mg. pentobarbital, i.e., he becomes very intoxicated with marked drowsiness, horizontal and vertical nystagmus, slurred speech and marked ataxia, it may be assumed that he is not addicted to sedatives. If only mild signs develop, such as horizontal nystagmus, his daily habit may be

estimated to be about 400 to 800 mg. This may be controlled by giving the estimated total in four divided doses, e.g., q6h.

If the patient exhibits complete tolerance to 200 mg. (no signs of intoxication), give 200 mg. q2h until mild signs of intoxication develop. Testing should be done just before the next dose is due. To calculate the daily pentobarbital dosage needed, one may assume that it takes about eight hours to recover from the effects of one dose. Since there are three 8-hour periods in 24 hours, one may simply multiply the dose needed to produce mild intoxication by 3 to determine the amount needed for the first 24 hours. However, 100 mg. should be subtracted from each dose following the initial dose to determine the dose needed to produce mild intoxication, because of the short interval between doses. For example: 200 mg. at 7 A.M., 200 mg. at 9 A.M. and 200 mg. at 11 A.M. leads to mild intoxication prior to 1 P.M. Add 200 mg. + 100 mg. + 100 mg. = 400 mg. Then multiply by 3 and the estimated 24-hour need is 1200 mg.

If full blown intoxication develops, it is likely that one failed to recognize the mild signs of intoxication preceding the last dose. Instead of 1200 mg. his daily requirement would be about 900 mg., i.e., 200 mg. + 100 mg. = 300 mg. Multiply 300 mg. by 3 and the total is 900 mg. When full blown intoxication develops, one must wait for it to subside before giving subsequent doses.

If the patient has a large habit and requires more than three doses of pentobarbital 200 mg., given q.2h., the formula must be changed so as to avoid excessive intoxication. Proceed as follows: 200 mg. at 7 A.M., 200 mg. at 9 A.M., 200 mg. at 11 A.M. and 200 mg. at 1 P.M. leads to mild intoxication prior to 3 P.M. Add 200 mg. + 100 mg. + 100 mg. = 400 mg. Multiply by 3 and you get 1200 mg. Then add 100 mg. and the estimated 24-hour need is 1300 mg. Proceed in the same manner if additional doses are needed to produce mild intoxication.

When the daily requirement is estimated to be more than 800 mg., it is advisable to shorten the interval between doses to keep each dose at 200 mg. or less. This will help to prevent excessive intoxication.

Detection of early signs of intoxication is not always easy. When they are missed and subsequent doses are given, excessive intoxication may occur. This is to be avoided as intoxicated patients are difficult management problems. They may fall and hurt themselves, or they may become aggressive and loud and may injure others as well as themselves or damage property.

When leaving orders after completion of tolerance testing, one should leave some leeway to the nurse to allow for the possible development of excessive intoxication or signs of withdrawal. If excessive intoxication occurs, the nurse should be instructed to omit the next dose and subsequent doses should be decreased. If withdrawal signs develop, subsequent dosage should be increased. After the patient is stabilized on a 24-hour schedule, and shows neither intoxication nor withdrawal signs, one should reduce the 24-hour dosage by about 100 mg. a day. If mild signs of withdrawal develop, maintain a steady schedule for a day or so and then resume reduction by 100 mg. a day.

If the patient is seizure-prone due to epilepsy or other neurological disorders, the daily reduction should be decreased to 50 mg. a day. If he has been on diphenylhydantoin or other antiseizure medication, it should be continued. However, diphenylhydantoin is not thought to be helpful in preventing withdrawal seizures.[3] In addition phenothiazines and reserpine are not thought to be helpful in preventing seizures or psychosis due to drug withdrawal and should be avoided.

In patients with impaired hepatic function one must be cautious to avoid precipitating hepatic coma. If acute hepatitis or decompensated cirrhosis is present, the test dose should be omitted. If necessary, small doses of pentobarbital or chlordiazepoxide may be used to control abstinence phenomena. However, patients in early or impending hepatic coma generally do not require sedative drugs and are usually better off without them.

In elderly patients it is usually desirable to reduce the test dose of pentobarbital to 100 mg. However, it should be followed with 200 mg. in two hours if the patient proves to be completely tolerant, and the above-described procedure followed to determine the dose of pentobarbital needed during withdrawal.

FACTORS UNDERLYING THE MEDICAL DISORDERS SEEN IN ADDICTS

The phenomena of tolerance, physical dependence and psychological dependence lead to the use of large quantities of the addicting drug.[4] As tolerance develops larger and larger doses are

needed to obtain the desired effect until a point is reached where very little pleasure is obtainable. Then the drug must be taken at regular intervals to prevent the very unpleasant symptoms of the abstinence syndrome. The addict becomes primarily concerned with supporting his habit, and other needs become of secondary importance. Thus, he tends to neglect his need for a proper diet, cleanliness, physical appearance, work, social contacts and care of illnesses. He loses his self-esteem and lacks motivation to be a productive member of society. He deteriorates mentally and physically and, as a result, becomes disease-prone.

The "black market" is another factor. In the United States heroin is available only in the "black market" as it is illegal to produce, sell or use it. It is smuggled in by racketeers who make huge profits. When a user buys a "bag" of heroin, he usually does not know what he is buying. Its potency is quite variable. It has been "cut" many times with a variety of white powders resembling heroin such as quinine, lactose, sedatives, starch, talc, etc. The "pusher" who sells heroin is usually a user himself, and it has been "cut" many times before he gets it. He sells it to support his habit. The individuals who make the really big money from the illegal sale of heroin are far removed from the "pusher" and very hard to identify. Tolerance develops rapidly for heroin, and the user may spend up to $200.00 a day to support his habit. Therefore, he must engage in lucrative activities. Males primarily engage in theft and must steal many times the cost of their habits to get the cash to pay for their "bags." Females commonly resort to prostitution as well as theft, and both males and females resort to "pushing." Other addicting drugs besides heroin are sold illegally, and the buyer often has to pay a high price for a drug of unknown identity, quality and potency.

It is not difficult to see how the "pusher" and the buyer of illegal drugs frequently get into trouble with the law and often have to go to jail or prison. It is also easy to see how injecting a variety of foreign materials repeatedly over long periods of time is likely to give rise to adverse effects in addition to the harm caused by the drug addiction per se.

Heroin is the opiate that is abused by about 90% of opiate addicts.[5] This is so for a variety of reasons. It is common practice for heroin addicts to get together in cheap hotel rooms and share their injection equipment. They do not use adequate sterile techniques. The use of unsterile equipment leads to infections and the sharing of the equipment leads to the spread of infections such as serum hepatitis.

The constipating effect of opiates, for which tolerance is less rapidly built up than for the euphoric effects,[4] leads to the use of laxatives and lubricants. The chronic use of laxatives leads to irritability of the colon. Chronic use of mineral oil may lead to lipoid pneumonia due to aspiration into the respiratory tract or to malabsorption of the fat soluble vitamins. Continued straining to induce bowel movements may partially account for the high incidence of hemorrhoids among addicts.[6]

Opiates have a depressing effect on respiration making respirations slow and shallow. This may partially account for the high incidence of respiratory diseases such as pneumonia, upper respiratory infections and tuberculosis.[6] Depression of the cough reflex may lead to aspiration.

Single doses of 45 mg. or more of morphine cause a decrease in 17-ketosteroid urinary excretion ranging from 12 to 58 per cent.[7] During active morphine addiction the excretion is 17-ketosteroid and 17-hydroxycorticosteroid is each decreased to less than half its pre-addiction level.[7, 8] Abrupt withdrawal of morphine is followed by sharp increases in excretion of both with return to normal levels after recovery from withdrawal.[7, 8] Before, during and after addiction to morphine the administration of ACTH results in a striking rise in 17-ketosteroid excretion.[7] These observations at the Addiction Research Center, Lexington, Kentucky, show that adrenal and gonadal functions are depressed during morphine addiction. However, they respond well to exogenous hormone stimulation. The increased excretion of 17-ketosteroid during withdrawal is probably largely due to increased adrenocortical hormonal secretion.[8] However, the gonads may be partially responsible since spontaneous sexual excitement commonly occurs at that time.[7] Morphine does not act directly on the adrenal and gonads since these organs respond to ACTH or gonadotropin, respectively, when their functions are suppressed during morphine addiction. Morphine probably acts on the anterior pituitary, the hypothalamic centers or the central nervous system centers which affect the hypothalamus

and the pituitary.[7] This action is probably at least partially the explanation for the common occurrence of secondary amenorrhea and a variety of other menstrual abnormalities among female opiate addicts.[9] Further studies are indicated to determine the addict's ability to respond to natural stresses during opiate addiction. He may be more susceptible to a variety of diseases for this as well as the other reasons already mentioned.[1]

MEDICAL DISORDERS COMMONLY SEEN AMONG ADDICTS

Serum hepatitis in its acute form is the most common of the serious medical disorders of the opiate addict. It is thought to be spread by contact with the blood of another addict in the course of sharing injection equipment. Fortunately it is usually rather mild and the prognosis is generally good.[1, 10] It is best treated conservatively with rest and a good well-balanced diet. Steroids should be reserved for the rare cases that fail to respond to conservative measures. During the past seven years we have treated approximately a thousand cases of acute serum hepatitis in addicts at the Lexington Clinical Research Center without using steroids, and there have been no deaths from hepatitis during this period. Chronic, active, self-perpetuating hepatitis has not been a problem among heroin addicts for us or others.[11] Recovery from acute hepatitis may be prolonged for several months, but clinical recovery eventually occurs in nearly all cases. Cherubin et al. have recently reported that histological studies of the liver in narcotic addicts with chronic liver disease often show chronic persisting hepatitis, acute focal necrosis, and non-specific reactive hepatitis and, infrequently, show chronic aggressive hepatitis.[11] Cirrhosis has not been a problem for us except occasionally among those addicts who also abuse alcohol.[1, 12] Recurrences of acute hepatitis are frequently seen but are usually milder than the initial attack. Isolation for acute serum hepatitis is not considered necessary. The patient should be instructed to wash carefully after use of the toilet and to use individual linens. This, of course, should be everyone's routine. Serum hepatitis is not thought to be spread by gastrointestinal means, but one can never be sure one is not dealing with infectious hepatitis. The Australian or Hepatitis Associated Antigen is now thought by many to be a component of the specific viral agent responsible for serum hepatitis.[13] It is likely there soon will be reliable laboratory tests for differentiating serum and infectious hepatitis. It is possible that serum hepatitis may be spread by kissing when the infected individual has bleeding gums. Isolation may be temporarily advisable for a patient with serum hepatitis who is bleeding and where the danger of contact with the blood is present.

About 11 per cent of patients admitted to the Clinical Research Center at Lexington, Kentucky have a reactive VDRL. About forty per cent of these show a reactive FTA (absorption) test. The remaining sixty per cent are considered to be Biologic False Positive reactors. It is conjectured that the high incidence of BFP reactions is related to the repeated injection of foreign materials present in "black market" heroin. It is likely that these foreign materials induce immunological responses that cause the VDRL to be reactive. It is unusual to find a definite explanation for the BFP reaction. Most such patients are apparently well. Those patients who have syphilis should be treated vigorously with long-acting penicillin as recommended in the standard texts. Gonorrhea should be searched for also. Cultures should be taken from the cervical canal of the female and immediately planted on Thayer Martin medium and incubated in an atmosphere containing two per cent to ten per cent carbon dioxide. Tetracycline is a good substitute for penicillin for those patients with syphilis or gonorrhea who are allergic to penicillin.

Malnutrition is common among addicts due to the neglect of dietary needs.[1] Considerable weight loss occurs during active addiction. Iron deficiency anemia is commong among females. The female negro addict occasionally uses large amounts of laundry starch to supply her caloric needs and may present with severe iron deficiency anemia.

The quinine present in "black market" heroin may induce a hemolytic anemia in those individuals with glucose-6-phosphate dehydrogenase deficiency. This is quite common among negroes. The presence of target cells on the routine peripheral blood smear may serve as a clue to this deficiency in addicts.[6]

Tinea versicolor and dermatophytosis of the feet are both very common presumably from lack of cleansing of the skin.[1]

Scars from injecting heroin adulterants under the skin as well as from healed infections and excorciations are frequently present.[12] Staphylo-

coccal skin abscesses are common. They may spread to produce metastatic abscesses, pneumonia and septicemia.

Tetanus occasionally occurs, especially among "skin poppers"[6, 14] — those who inject drugs under the skin. This is especially seen among female addicts. Tetanus has been estimated to cause from five to ten per cent of all addict deaths in New York City.[15] The site of the portal of entry is often not evident. Tetanus should be suspected when the patient complains of a sore throat and stiff neck, has a low grade fever and cannot open his mouth wide. Human antitoxin should be administered intramuscularly when the clinical diagnosis is made, and tetanus toxoid should be withheld until the acute stage has subsided. The maintenance of a good airway is essential. Valium is helpful in reducing muscle spasm and giving sedation.

Endocarditis is generally recognized to occur frequently among addicts.[6] The acute form is generally due to staphylococci and the tricuspid valve is often involved. The subacute form is generally due to alpha hemolytic streptocoeci. Candida endocarditis is seen occasionally.

The superficial veins become thrombosed and scarred from the frequent irritating injections, leading to hyperpigmented venous tracks, the hallmark of the addict.[12] It is often very difficult to draw blood for laboratory tests, and intravenous therapy can be very difficult to carry out. It may be necessary to use the neck veins, the femoral veins or the subclavian veins, and venous cut-downs often become necessary. Deep vein thrombosis also occurs with increased frequency, and embolism which may be septic or non-septic may occur. Edema of the hands and feet is often seen due to venous insufficiency resulting from the many thrombosed veins and scars.[1] Meperidine is particularly likely to produce scarring especially when in a concentrated form of 100 mg. per ml. Quinine, which is often used to "cut" heroin, is very irritating and productive of scarring.

Erythematous and bullous skin lesions with histologic sweat gland necrosis are occasionally observed in barbiturate addicts following a bout of coma and are thought to result from local trauma.[16] They are also seen in other varieties of drug-induced coma as well as carbon monoxide poisoning.[16]

Leukopenia, lymphocytosis and atypical lymphocytes are often observed during routine hematological testing of heroin addicts.[6] It is likely that they represent immunological responses to the repeatedly injected foreign material or bacteria although hepatitis may also be responsible.

D. S. Nickerson et al., have recently reported some interesting immunological observations on a group of 25 long-term heroin addicts.[17] Striking increments in heat-stable opsonins for *Escherichia coli* and *Serratia marcescens* were found in many addicts' sera as compared with normal controls. Marked elevations of gamma M were found in many addicts' sera, accompanied by 19S antibacterial opsonins. Anti-gamma globulin factors were present in thirty-six per cent of the addicts studied. There was no impairment in ingestion or killing of test bacteria by polymorphonuclear leukocytes obtained from subjects on substitution narcotic therapy. It is conjectured by the authors that repeated intravenous heroin injections contaminted with bacteria, fungi or "fillers" might inadvertently stimulate potent opsonins in much the same way as do the bacteremias of subacute bacterial endocarditis. One unusual aspect of their observations was the potent opsonic capacity of many addict sera in the face of relatively low or normal levels of gamma globulin. This was considered particularly unusual since many chronic heroin addicts have been shown to have subclinical chronic hepatitis, and liver function tests indicated a low grade active hepatitis among six of the patients studied by them. They also suggested that the high incidence of anti-gamma globulin factors and the marked elevations of gamma M might be due to repeated intravenous injections of the "fillers" or bacteria present in "black market" heroin.

Overdosage of heroin is now considered one of the leading causes of death in the cities where heroin is heavily abused, such as New York City, among the younger age groups that so abuse it.[15] Overdosage often occurs in addicts who have lost their tolerance to heroin due to temporary cessation of their habits following withdrawal. When they return to the street and take a dose of unknown quantity and quality, they may go into coma due to severe respiratory depression if they receive a potent preparation. They may present with coma, fever and pulmonary edema[15] and be clinically mistaken for severe pneumonia. It has been suggested that some deaths now attributed to overdosage may be due to acute

anaphylaxis.[6, 17] This seems quite reasonable as hypersensitivity could be induced either by bacterial or "filler" antigens contained in the "black market" heroin. Overdosage of heroin or other opiates should be treated with the usual measures including maintenance of an adequate airway, oxygen, artificial respiration when necessary, and suction. In addition nalline in a dosage of 2 mg. to 10 mg. I.V. is very useful. It is a specific opiate antagonist, and, if adequate dosage is given, the patient will show an immediate response with increased rate and depth of respirations. It is often necessary to give repeated doses when the patient lapses back into severe respiratory depression. A newer, more potent opiate antagonist called naloxone is also very valuable but has not as yet been released for general use by the FDA.

Overdosage of sedatives, especially barbiturates, has long been recognized as a common cause of coma and death among non-addicts as well as addicts. A specific antagonist is not available for such drugs so one must rely on the general resuscitative measures and occasionally use dialysis.

Periodontal disease and dental caries are very common among heroin addicts due to neglect of oral hygiene.[1]

Respiratory disorders including viral upper respiratory infections, pneumonia and tuberculosis are all common occurrences among heroin addicts.[5] Staphylococcal pneumonia often occurs as a metastatic spread from skin infections. The abnormal life of the addict, with neglect of his special needs, is the likely explanation for the high incidence of respiratory infections. Chronic rhinitis is very common among heroin addicts. Antihistamines, especially diphenhydramine, are very useful in providing symptomatic relief.

Angiothrombotic pulmonary hypertension and pulmonary granulomas may result from the "fillers" (talc and starch) which are present in oral secobarbital and oral tripelennamine and which are occasionally injected intravenously by addicts.[18] Such "fillers" may occasionally be used in "black market" heroin as well. This entity has not been observed at the Lexington Clinical Research Center.

Psychosomatic complaints of all varieties are encountered with great frequency among addicts.[1] They are frequent complainers and often try to persuade the physician to prescribe narcotics or sedatives for them. After carefully examining them and arriving at the diagnosis of psychosomatic disease, the physician usually obtains the best results by explaining to them the nature of their complaints and avoiding unnecessary drugs.[1]

After having completed substitution therapy during withdrawal of the addicting drugs and attended to the medical disorders that need attention, the physician should consider referral of the patient to one of the facilities for long-term management of the patient's basic personality disorders where he may learn to confront himself, accept himself and others, and try to improve himself. Such facilities have also had considerable success using maintenance methadone among heroin addicts, as methadone often adequately curbs the need for heroin and enables them to make a satisfactory social adjustment to life.

CONCLUSION

The medical problems of drug addicts are many and varied and at times difficult to handle. The physicians in the communities where drug addiction is prevalent will find themselves increasingly called upon to advise and treat such patients. It is hoped they will accept the challenge of better understanding and managing the medical problems presented by drug addicts.

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A COMPARISON OF SCANNING AND CHEMICAL LABORATORY TESTS IN THE DIAGNOSIS OF LIVER DISEASE

S. V. HILTS, M.D.
J. G. McGREGOR, JR., M.D., F.A.C.P.
T. L. JARKOWSKI, M.D., F.A.C.P.

The detection of occult liver disease is often difficult, and the clinician has long relied on chemical liver function tests (CLFT) to aid him in his diagnosis. Automation has made certain CLFT a part of almost every patient's workup, and the question of liver disease, previously unsuspected, has often been raised at this point. At Tucson Medical Center, many patients have been referred to the Department of Nuclear Medicine for liver scanning primarily on this basis.

A brief retrospective study of scans, CLFT, and the hospital records of discharged patients suggested that we should evaluate both the accuracy of the traditional chemical tests and the possibility that radionuclide scanning might be an effective test of liver function.

A prospective study was then designed, wherein we could evaluate the ability of liver scanning and of the various CLFT to determine the presence or absence of liver disease. We did not assess the ability of the tests to diagnose specific hepatic diseases. The study was based on 114 inpatients, referred for liver scanning by their attending physicians, who had cause to suspect some form of liver disease because of abnormalities in history, physical examination, or CLFT. Blood samples were drawn within 72 hours of scanning and processed in routine (not automated) fashion by the hospital's clinical laboratory for (1) total serum bilirubin, (2) alkaline phosphatase, (3) serum protein electrophoresis, (4) serum glutamico-oxaloacetic transaminase (SGOT), (5) lactic dehydrogenase (LDH), and (6) LDH isozymes. The methods used are summarized in Table 1.

From the Departments of Medicine, Nuclear Medicine, and Pathology, Tucson Medical Center, P.O. Box 6067, Tucson, Ariz.

Table 1. Chemical Liver Function Tests Employed

Test	Method	Normal Values
SGOT	Amador & Wacker[1]	Less than 37 units
Alkaline Phosphatase	Babson et al.[2]	Less than 36 units
LDH	Wacker & Amador[3]	Less than 166 units
Total Bilirubin	Mertes & Faulkner[4]	Less than 1.1 mg%
LDH Isozymes and Protein Electrophoresis	Cawley[5]	Isozyme 4 — less than 7% Isozyme 5 — less than 5% Albumin—greater than 54% Alpha 1 — less than 7% Alpha 2 — less than 11% Gamma — less than 20%
Total Protein	Gornall et al.[6]	5.8 to 8.7 mg%

Categorization of CLFT result as "normal" or "abnormal" was made on the basis of the upper limits listed by the authors (and lower limits in the case of serum proteins). Experimentation using higher limits for SGOT and alkaline phosphatase produced no improvement in correlation with clinical diagnosis, so the original limits were followed rigorously.

Scanning was done with 200 microcuries of colloidal gold-198 (Aurcoscan-198^{R}, Abbott Laboratories), injected not more than 24 hours prior to obtaining anterior and right lateral views with a 5-inch rectilinear scanner (Baird-Atomic). Background cutoff of 5 to 15 percent was used routinely; in some cases, studies were repeated with higher cutoff for evaluation of questionable lesions.

For purposes of this study, the scans were reread without reference to clinical information. Scans were classified as "abnormal" if they showed either mass lesions or patchy distribution of uptake. Hepatomegaly alone was not considered an abnormality, nor were splenomegaly, increased splenic uptake of radiogold, or displacement of liver by extrinsic pressure. A gastroenterologist (JGM) and an isotopologist (SVH) reviewed the completed hospital records, including biopsy or autopsy results in 45 of the 114 patients, and clinically classified the livers as either normal or abnormal.

RESULTS

On the basis of our clinical review of 114 patients, 57 were found to have "normal livers" and 57 to have liver disease. Most of the "normal liver" group had significant disease of some other organ system. Table 2 depicts the findings in order of overall accuracy (correct positives + correct negatives as a percentage of the total group).

The "total correct" column indicates that individual CLFT are not dependably accurate in discriminating between normal and abnormal livers. In evaluating these figures, it should be remembered that an accuracy of 50 percent would be expected by the flip of a coin. The best of these tests, the alkaline phosphatase and SGOT, suffer from a large number of false positive results. The complex and expensive determinations of serum protein electrophoresis and LDH isozymes add little to sensitivity or discrimination.

The scan emerges as the most accurate test for liver abnormality in this study. Its determination was correct in four of five cases, and it showed the lowest incidence of false positives of any test.

Critics may suggest we erred in calling patients normal who actually had liver disease, an error which would explain the remarkable incidence of "false positive" CLFT. However, Table 3 demonstrates that cases proved to be normal by biopsy or autopsy had an even higher percentage of false positives than the total group. While there is no doubt that abnormal CLFT and scan results initiated the decision to biopsy most of the ten normal livers, the findings show that histologically normal livers may coexist with abnormal laboratory values.

Clinicians rarely make judgments on the basis of a single test; customarily, a "battery" of CLFT is ordered. Table 4 shows the accuracy of this approach to the detection of liver disease. If all the tests in a selected combination were in agreement, then, and only then, was the battery more accurate than the best individual test. If, as more frequently happens, the component tests were in disagreement, the physician is reduced to reliance on whichever test best fits his preconceived idea of what ails the patient.

The best accuracy was obtained with a combination of only two studies, the scan and the

Table 2. Accuracy of Scan and Chemical Liver Function Tests in Prediction of Liver Disease

	Normal Liver		Abnormal Liver		Total Correct Results of Tests
	Abnormal Test	Normal Test	Abnormal Test	Normal Test	
Scan	6	51	39	18	79%
SGOT	20	37	40	17	68%
Alkaline Phos'tase	32	25	51	6	67%
LDH	12	43	24	30	61%
Total Bilirubin	8	49	21	36	61%
Gamma Globulin	15	42	28	29	61%
LDH Isozyme 5	34	20	43	7	61%
Albumin	38	19	50	7	60%
LDH Isozyme 4	33	21	38	12	57%
Total Protein	7	50	2	55	46%

Tests are listed in order of total percentages, defined as the sum of the Normal/Normal and Abnormal/Abnormal columns divided by the total number of patients (114 except in the LDH and Isozyme tests, which were not completed in a few cases). A "false positive" is an abnormal result in a normal liver, as seer in the Alkaline Phosphatase, while a "false negative" is a normal test in an abnormal liver, as seen in Total Protein values.

Table 3. Results in 39 Cases Proved by Biopsy or Autopsy

	Histologically Normal Liver		Histologically Abnormal Liver		Total Correct Results of Tests
	Abnormal Test	Normal Test	Abnormal Test	Normal Test	
Scan	3	7	20	9	69%
SGOT	4	6	22	7	72%
Alkaline Phos'tase	8	2	27	2	74%
LDH	1	9	14	15	59%
Total Bilirubin	1	9	15	14	62%
Gamma Globulin	2	8	13	16	54%
LDH Isozyme 5	5	5	20	9	64%
Albumin	7	3	28	1	80%
LDH Isozyme 4	4	6	18	11	62%
Total Protein	0	10	1	28	28%

Tests are listed in the same order as in Table 2, for comparison. Percentages are not comparable because there are not equal numbers of normal and abnormal livers in this group, as in the total study. In the small group of 10 proven normals, false positive results are common in the three best tests.

alkaline phosphatase. Addition of other tests decreases the number of cases in which all are in agreement and thereby the utility of the combination, without increasing the percentage accuracy.

Table 4. Accuracy of Combined CLFT and Scanning, When Results Are in Agreement, in Prediction of Liver Disease

	Normal Liver		Abnormal Liver		Total Correct Results	
	Abnormal Test	Normal Test	Abnormal Test	Normal Test	No.	%
Alk. Phos. + SGOT	17	22	38	4	60/81	74%
Scan + Alk. Phos.	4	21	35	3	56/63	89%
Scan + Alk. Phos. + SGOT	3	19	29	3	48/54	89%
Alk. Phos. + SGOT + Bilirubin	4	20	19	4	39/47	83%
Alk. Phos. + SGOT + LDH	6	18	18	4	37/47	79%
Scan + Alk. Phos. + SGOT + LDH	1	15	15	4	30/35	86%
Scan + Alk. Phos. + SGOT + Bilirubin	1	17	13	3	30/34	88%

Tests are listed in order of total number of applicable cases, i.e., those in which the tests listed were all positive or all negative. Note that accuracy may be high, but in such a very small number of cases that the particular combination is rarely helpful.

DISCUSSION

Every patient, normal or abnoral, in our series of 114, had at least one abnormal CLFT. Moreover, as shown in Table 2, the errors of CLFT are largely traceable to false positive results, while the scan, which is less sensitive, usually erred on the side of false negatives.

Our initial suspicion of the inability of CLFT to determine presence or absence of liver disease seemed to be justified by the findings of this study. We emphasize that no effort was made to assess their accuracy in supporting specific diagnoses. The failure of these tests to reach expected levels of accuracy requires some explanation.

Much of the discrepancy shown in our study may arise because CLFT are developed in a retrospective fashion. In the research laboratory, the results of a test in patients with known, isolated hepatic disease are compared with those in a totally healthy normal population, such as medical students. In sharp contrast, tests are clinically employed in individual patients suspected of some disease process which may or may not involve the liver, often with a background of multiple diseases of other organ systems. Thus the test, developed retrospectively, is asked to give prospective answers.

Normal values for the CLFT were developed in a group of persons known to be free of disease. Again in contrast, the patient group to be studied by the test varies in age, multiplicity of diseases, and interference by other investigative procedures. Therefore, the normal values developed in the first group may be totally inapplicable to the clinical problem. This may explain the apparent oversensitivity of these widely accepted CLFT.

This study indicates that the interpretation of CLFT in the clinical setting should be done with caution. A single set of "normal values" cannot suffice for patients of various ages and combinations of diseases. There is a great need for detailed study of the effects of extrahepatic disorders on CLFT, recognizing the complexity of the task.

The accuracy of liver scanning in determining existence of disease was surprisingly high. Possibly this is because interpretation of liver scans, done in a clinical setting, recognizes no fixed "normal values." There is great need of smiliarly flexible criteria for CLFT.

SUMMARY

A prospective study of 114 inpatients assessed the accuracy of liver scanning and chemical liver function tests (CLFT) in determining the presence of liver disease. The most accurate were the scan (79%), SGOT (68%), and alkaline phosphatase (67%). Some tests were no more accurate than chance. The unexpected inacuracy is ascribed to the retrospective development of CLFT, as opposed to their prospective use. More clinically applicable normal values for CLFT must be developed.

ACKNOWLEDGMENTS

This study was supported by Abbott Laboratories, Inc. The assistance of Miss Sandra Kramer is gratefully acknowledged.

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PROCEEDINGS OF THE SECOND NATIONAL CONFERENCE OF

DARWIN W. NEUBAUER, M.D.
TUCSON, ARIZONA

George Rosemond, Temple University. There has been a slight rise in mortality from this disease which is usually multi-centric in origin. We have reached the practical limits of excisional surgery. Simple mastectomy is adequate therapy for cystosarcoma phylloides and lobular carcinoma in-situ, in the latter there should be simultaneous biopsy of the opposite breast. In general, cysts of the breast should be treated by aspiration, excision is rarely indicated. Carcinoma of the breast in children is a rare and different disease with a better prognosis. Prophlactic oophoractomy is not recommended. "High risk groups" should include:

1. Those who have had one breast removed.
2. Those with familial history of breast cancer.
3. Patients with hyperactive ductal epithelium.
4. Those who have never married, nulliporous, and have never lactated.
5. Patents with previous pelvic surgery.
6. Patients under hormonal therapy.

Palliative treatment should be started only if there is something to palliate and the modalities of palliation should be used in sequence. Radical mastectomy seems to remain the best form of therapy.

Sidney Cutler — National Cancer Institute. The mortality rate for breast cancer is dropping slightly, from 26 to 25 per 100,000; but the incidence rate has increased considerably from 55 to 75 per 100,000. The five year survival has increased from 54 to 61%, probably due to more localized lesions being found, surgery being performed in 46% with localized disease rather than 38% as noted in 1950.

With a regional carcinoma, it is likely that further combinations of therapy should be tried. Certainly the dose schedule that has been used for Thio-tepa at the time of surgery and for the immediate postoperative days, has been inadequate.

Calvin Zippin — University of California, San Francisco. With an increased estrogen level, there is an increased incidence of cancer of the breast. In the Japanese, there is a genetic factor acting which results in a lower rate of breast cancer and a greater ability to survive the disease if it does develop.

Roy Hertz — Rockefeller University. The FDA on the basis of monkey experiments have not been able to show true neoplastic lesions of the breast from the use of the oral contraceptives, nor have there been really hyperplastic lesions of the breasts produced.

RICAN CANCER SOCIETY, LOS LOS ANGELES, CALIFORNIA, MAY 1971

In control setups, using beagle dogs with a high rate of spontaneous breast cancer at 9 to 10 years of age; giving these dogs estrogen in a dosage that may range from 2-10-25 times the human dose, they may develop an increased number of breast cancers. On the basis of these unusual experiments, four oral contraceptives have been withdrawn from the market.

Herbert Taylor — St. Louis University — Pathological Aspects In Relation To "The Pill". There have been no consistent changes noted by the pathologist in patients who take or do not take oral contraceptives. This is with respect to fibroadenoma, fibrocystic disease, the development of cancer, or alterations of the normal breast tissue. There has been no change in the age for biopsies for patients who are on, or not on the pill; and there has been no change in the incidence of cancer for patients who have utilized the pill or not.

Dr. Mortimer B. Lipsett — National Institute of Child Health. The amount of estrogen in the contraceptive estrogenic pill is more than a physiological amount, and it does cause an alteration in the body proteins by this small excess. There are receptor protein units on the uterus, the vagina and the breast which will retain estrogen if it is given to the patient; and if retained on an organ, will cause synthesis of new proteins and bring about growth. When a tumor shows this receptor, it too will respond to endocrinces as is noted with 40% of breast cancer having the endocrine receptor. He concludes that "the pill" is a potential threat to health. It is an excess source of estrogen causing altered proteins in the blood, a small change in the glucose tolerance, some changes in the lipids and the amount of triglycerides are increased. All of these changes are subtle and the final effect may not be evident until twenty years or so have passed.

Philip Sartwell — Johns Hopkins University. Thromboembolism does present a problem, but there is no evidence that the pill has been associated with an increase in the development of breast cancer in the age group where it has been used. "The pill" may be a more significant factor if it is used in the post-menopausal female, rather than as a birth control mechanism.

Dr. Martin P. Vessey — University of Oxford. Epidemiological studies have failed to show significant difference in breast neoplasia as a result of taking the oral contraceptives. Histologically there is no lesion that is characteristic of taking these pills and they actually may protect a patient from the development of some of the benign diseases of the breast.

Dr. Edward F. Lewison — Johns Hopkins University. Bilateral oophorectomy by the age of 40 results in a 75% diminution in the development of breast cancer. The following groups of women have a particular disposition to develop breast cancer:

1. The female with a strong family history of breast cancer.
2. The female who has had one breast removed for cancer.
3. The female with chronic cystic mastitis.
4. The patient with lobular hyperplasia.
5. The patient with abnormal mammograms.

In these patients the clinical risk is significantly greater for developing breast cancer than that of the average female population, which is 6%; and in these "pre-disposed patients" he would avoid long term stimulation with estrogen, even using the limited dose of estrogen as administered with "the pill".

The above group acting as a panel stated that they felt it was hazardous, but not proven, to treat the post-menopausal symptomatic female with estrogens; and in answer to the question: Should estrogens be given to the post-menopausal cancer patient with menopausal symptoms? — four of the five participants stated no and one did not answer.

VIRUSES AND BREAST CANCER

Leon Dmochowski, M.D. — M.D. Anderson Hospital. This is a systemic disease with a long preclinical course that to a great degree is controlled by host factors. A virus likely plays a roll.

Harish C. Chopra, Ph.D. — National Cancer Institute. Virus particles have been found resembling the oncogenic RNA viruses of monkey mammary carcinoma and in human breast carcinoma.

Dan H. Moore, Ph.D. — Institute for Medical Research, Camden, New Jersey. The genetic factor is extremely important; for example, in the Parses of Bombay 45% of the cancer developing in the female of this race is breast cancer and a virus has been found in these patients which is almost identical to the mouse breast virus and in a human virus.

Sir John Bruce — University of Edinburgh Medical School. A summarization of the work by Dr. McWhirter as started in 1940, comparing the results of simple mastectomy with extensive x-day therapy which they consider to be a more radical procedure than the convential radical mastectomy. Their conclusion was that the type of treatment of the primary disease was not of great consquence. In their cases with radical mastectomy, they had a morbidity that presented 27% of the patients having delayed wound healing, 24% had hematomas, 10% necessitated skin grafts, 10% developed anemia and 4% had limitations of motion of the shoulder. Contrast to this, those with simple mastectomy and deep x-ray therapy showed 6% with delayed wound healing, 5% had a marked skin reaction, 2% had significant nausea and vomiting, 2% tracheitis and 5% developed edema of the arm, 14% had limitation of shoulder motion. At 5 years, 76% were alive who had radical mastectomies, 66% who had had simple mastectomy plus radiotherapy. They had a higher mortality with simple mastectomy and x-ray treatment in their patients over 50 years of age.

SYMPOSIUM — IMMUNOLOGICAL FACTORS

Herbert F. Oettgen, M.D. — Sloan-Kettering Institute. The immune factors that do develop may impair host resistence.

John W. Berg, M.D. — National Cancer Institute. There is no evidence of true immunity. The lymphoid infiltration that may be noted, rather than being an immune reaction, is probably a response to necrosis of tissue.

Elizabeth S. Priori, Ph.D. — M.D. Anderson Hospital. Immunofluorescence studies with Sera From Breast Cancer Patients — noted an antigen in these patients with breast cancer but it was an antigen present also in patients with fibrocystic disease and osteosarcoma.

Thomas H.M. Stewart, M.D., CH.B. Noted that anaplastic tumors tend to have a positive skin test which may be irrevalent to any immunological response. The lymphocyte is associated with control and rejection of carcinoma by a patient, but an antibody may develop which blocks this effect on the cancer cells. He noted no real evidence that sinus histocytosis is linked to an immune reaction. In their antigen-antibody studies, the sera of patients with fibrocystic disease reacted more effectively than those with carcinoma; so he presented the question — Is there a common etiology? He concluded that if an antibody does develop, it has been detected in less than 0.5% of cancer patients.

Dr. David E. Anderson — M. D. Anderson Hospital — Genetic Considerations in Breast Cancer. Noted a bilateralality of the disease in almost

10% of the patients where there is familial history of breast cancer, and that in a greater number of these had multi-centric origin of their disease. He recorded a bilateral disease in only approximately 3% of patients with no familial history of breast cancer. The bilateral presence of breast cancer decreases as the age of the patient increases. He noted basically two types of breast cancer, that occurring early in life which has a greater tendency to be bilateral and seems to have some relationship to blood type O. The second type occurs in a later age group, has a less tendency to be bilateral and is more frequently associated with blood type A.

Dr. John E. Martin — St. Joseph's Hospital, Houston, Texas. Peri-ductal collagenosis may prove to be diagnostic in picking up early carcinoma while doing serial mammography.

Dr. Robert V. P. Hutter — New Jersey College of Medicine. He would consider the following to be minimal breast cancer, or pre-cancerous lesions:

1. Atypical hyperplasia.
2. Sclerosing adenosis.
3. Benign intraductal hyperplasia; which becomes malignant in 20 to 30% of the cases.
4. Lobular in-situ carcinoma with an increased number of acini and cells.
5. Paget's disease of the nipple.
6. Diffuse intraductal carcinoma.
7. Medullary carcinoma with lymphocytic infiltration.

Dr. Maurice Galante — University of California Medical School. Recommends a modified radical mastectomy on the side of the primary carcinoma with a biopsy of a similar area on the contra-lateral side.

Dr. John Martin. Doing serial mammograms with an interval of one per year, has noted 30 cancers developing in patients with periductal collagenosis. At the time of surgery, only one of these presented a false positive for malignancy.

Dr. Robert Hutter. Intraductal carcinoma may already be invasive, for in a routine examination of the breast, over 99% of the tissue is not microscopically examined. As a pathologist, he feels that if whole breast examination is requested, only 4% of the tissue is really checked. For lobular carcinoma in-situ, he recommends surgery. It should not be observed, for 1 in 3 will become invasive and the risk doubles for becoming invasive every 5 years. He found bilateral carcinoma in 18% to 25% of their patients who had radical mastectomy. In 18 cases where he fully examined the second breast, he found 16 of them to have carcinoma in this second breast.

Dr. Jonas Salk. It would appear that there is an immune deficiency existing in the patient with cancer. The anti-body that is developed protects the cancer rather than the patient. It would appear that the anti-body acts as a blocking agent. In the absence of this blocking agent, the anti-bodies of the patient with cancer, or the resistance of the host which probably exists in the lymphocyte, will protect the healthy individual from the development of cancer. However, the anti-bodies acting as blocking agents, by either coating the antigen of the cancer cell or acting upon the lymphocyte itself and make them ineffective.

Eugene U. Thiessen, M.D. — Strang Clinic, New York. In the past it has been our concept that 90% of breast cancer lesions were discovered by the patient. Their study would indicate that only 22% of cancer of the breast is discovered by the patient herself.

Louis Venet, M.D. — New York Medical College. Any single breast mass should be biopsied. Ten percent of them will be malignant even though they are clinically negative. The mortality rate is significantly different if the breast cancer is picked up by a screening procedure for patients over 50 years of age. There seems to be no alteration in the mortality rate for women under 50 years. Patients over 50 years of age present an overall mortality of 55% with the development of breast cancer; this drops down to a 9% mortality if the cancer is picked up during the screening procedure.

Victor A. Gilbertsen, M.D. — University of Minnesota Medical Center. Utilizing periodic physical examinations showed a pickup rate of 1.32 cancers per 1000 examinations. However the significant feature was that their patients who were found to have a breast cancer during a screening procedure and received adequate treatment, continued to survive at their expected survival rate, i.e., as if they had never developed a malignancy.

Robert L. Egan, M.D. — Emory University. Eighty percent of their breast cancer patients are operated upon while still in stage 1, and 92% have a negative axilla.

Wiley Barker, M.D. — University of California.

Compared the results of screening mammograms versus diagnostic mammograms. In 3500 patients examined as a screening procedure, 46 of them had cancer of the breast, in 2% the lesion was bilateral, 27% had metastasis to the axilla. In contrast, 1400 patients who had mammograms done as a diagnostic procedure, 89 cases of cancer were found, in 8% of them the lesion was bilateral, and 68% had metastasis to the axilla.

In comparing a cost per case for discovery of cancer of the cervix as versus discovery of cancer of the breast, their cost for mammograms was $26.50 per case. This amounted to $2,223.00 per case of breast cancer found. However, in doing pap stains to check for cancer of the cervix, their cost for pap stains was $6.40, or a total cost of $2,100.00 for each case of cancer of the cervix found.

Philip Strax, M.D. – LaGuardia Hospital – Discussing the health insurance plan for Greater New York. In their patients 40 to 49 years of age, they did not experience a reduction in the mortality rate by an early determination of breast malignancy by mammography. However, in patients over 50 years of age, there was a reduction in mortality by this early discovery of the malignancy. Their cost per patient for mammography was $17.00.

John N. Wolfe, M.D. – Hutzel Hospital, Detroit. Xeroradiography is more accurate, requires less exposure, is rapid and is easier to read.

Ray N. Lawson, M.D. – McGill University – Thermography. By the use of this modality, they are finding 30% more subclinical cancer of the breast and are obtaining their best results by the use of equipment obtained in Europe and particularly from Sweden.

Gerald D. Dodd, M.D. – M. D. Anderson Hospital – Thermography. The accuracy of this method varies markedly, between 50 and 90%. Their own accuracy is 85% and this is using old equipment.

Francis E. Rosato, M.D. – University of Pennsylvania School of Medicine. Serum Fucose normally runs 9 to 12 mgms. per cent, in 86% of cancer patients they found it to be 12 mgms. per cent or more. If the serum fucose is elevated and the serum protein is below 8.5 grams. percent, a high percentage of their patients were found to have carcinoma of the breast. However, they do not feel that this method can be used as mass screening test at present, for 35% of patients with cancer do not satisfy the critera, and false positives are obtained with tissue trauma, arthritis, diabetes and cirrhosis.

H. J. G. Bloom, M.D. – Royal Marsden Hospital & Institute of Cancer Research. Medullary breast carcinoma with marked lymphoid infiltrate, even though pleomorphic and the infiltrate is of both lymphocytes and plasma cells, presents a relatively good prognosis. It would seem that these patients have a superior resistence to breast cancer and also have improved resistence to other diseases.

Willis P. Maier, M.D. – Temple University. All dominant breast masses should be biopsied unless they can be made to disappear by aspiration. Pap stains of the aspirant are of little value; of course, it will be positive in the rare intra-cystic carcinoma. If a cyst is aspirated, disappears and then recurrs, they should be a biopsy. Check all patients two weeks after aspirating. A breast cyst refilling occurred in less than 5% of their aspirated cases. If grossly bloody fluid is obtained, consider this an intra-cystic carcinoma, refill the cyst and schedule promptly for biopsy.

Robert V.P. Hutter, M.D. – Professor of Pathology, New Jersey College of Medicine. Cancer is not an isolated disease, it is multi-focal. If whole organ sections are done, 50% have multiple sites of independent carcinoma, and 20% have carcinoma in the second breast.

David A. Wood, M.D. – Cancer Research Institute of California. Adeno-cystic disease is associated with a greater number of cancers. Intraductal papillary adenoma calls for checking of all areas of the specimen. More advanced malignancy is noted developing in sclerosing adenosis than in-situ duct carcinoma, or in medullary carcinoma with lymphatic infiltration or in gelatinous carcinoma. The latter has a slow natural history.

In discussing infiltrating ductal carcinoma, 3 panel members would do a simple mastectomy on the other side; one would do a biopsy of the mirror image area on the other breat; the third would recommend a mammogram on the opposite breast.

Benjamin F. Byrd, Jr., M.D. – Vanderbilt University. Radical mastectomy is still the treatment of choice.

Jerome A. Urban, M.D. – Memorial Hospital. There is no increasing evidence that preservation of the lymph nodes is of help to prevent local or distal metastasis. He encourages a modified

radical mastectomy or simple mastectomy with a low axillary dissection for a minimal infiltrating carcinoma and lobular carcinoma in-situ. For carcinoma of the lateral breast, do a classical radical mastectomy. For medial and central malignant lesions of the breast, do the classical radical mastectomy plus an internal mammary node dissection.

J. Englebert Dunphy, M.D. — University of California. At present no one is showing better results with a lesser procedure than we are obtaining with the radical mastectomy. In 25 to 30% of Dr. Crile's cases, the nodes become positive and necessitate a later axillary dissection. The modified radical mastectomy is probably satisfactory for the very early case. The simple mastectomy is acceptable in the elderly patient. The place of local excision of the lesion in treatment of breast cancer is debatable, for most of these lesions are multi-centric in origin.

Clayton H. Crosby, M.D. — Saskatchewan. Recommends standard radical mastectomy for stage 1 carcinoma. Radical mastectomy with irradiation for stage 2, and a bilateral mastectomy if there is a simultaneous cancer in both breasts.

Even if the patient is 80 years of age, there is a life expectancy of 7.4 years, and this group he would treat with radical mastectomy.

Better results are noted in patients developing cancer in the lactating breast than if it is developed during pregnancy. If cancer does develop in a breast during pregnancy, no matter what the stage of pregnancy, a radical mastectomy is recommended.

Irwin D. J. Bross, Ph.D — Roswell Park Memorial Institute. Statistically he showed that a patient with four or more positive axillary nodes from breast carcinoma, already had a systemic spread, and therefore, statistically he feels that they should be treated as having disseminating disease. (A poorly accepted paper)

Dr. Urban. A patient with positive nodes at level 3 of the axilla are not incurable; in fact, they are comparable if this is a micro-metastasis at level 3 to a large node, positive at level 1.

Dr. Crosby. They have failed to cure a second cancer developing in any patient under 35 years of age, but have had relatively satisfactory results in the treatment of the first cancer. In this age group there is a higher degree of bilaterality of breast cancer. Therefore, they examine these patients frequently and treat with a mastectomy on the second breast very readily.

Drs. Urban and Crosby in the high risk patient would do a biopsy of the opposite breast in all patients. This was not confirmed by Dr. Dunphy.

Dr. Crosby. If the patient had had a radical mastectomy and desires another child, and this malignancy was in stage 1, there is not an increased risk of developing another cancer or metastasis, so believes Dr. Dunphy. This is doubted by Dr. Urban.

William L. Caldwell, M.D. — Vanderbilt University. Too few stage 2 and stage 3 patients receive preoperative irradiation which might prove beneficial to local and regional nodes.

A. Raventos, M.D. — Radiologist, University of California. Postoperative radiation therapy probably decreases the local recurrence rate but does not change the survial. 60% of the patients already have distal metastasis, 25% of the patients have negative nodes, so the possibility of help is to 15% only, and since radical surgery has solved many of these cases, radiation is probably beneficial in only 5% of the case. The local recurrence rate is reduced 2 to 3% of postoperative irradiation therapy is used. However the recurrence can be treated as well when it does recur by irradiation.

Irradiation does accelerate the process of aging and he worries particularly about the damage to other tissues in the area such as the heart and lungs. However, he does look favorably upon radiation therapy to the internal mammary nodes and is convinced that irradiation does not promote distal metastasis.

Bernard Fisher, M.D. — University of Pittsburgh. Thio-Tepa as given in the past at the time of surgery for the two days immediately postoperative, helped only the pre-menopausal female with four or more positive axillary nodes. To date, prolonged chemotherapy has no justification. There is no advantage to prophylactic castration, either with positive or negative nodes. Radiation therapy given postoperatively shows similar results with or without this therapy, with or without positive nodes.

The Panel consisting of Drs. Raydin, Caldwell, Raventos and Fisher would recommend postoperative radiation therapy in the fairly favorable case if there are positive axillary nodes, if there has been no axillary exploration, or if the lesion is medially located. Irradiation therapy can sterilize the internal mammary nodes.

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Three thousand two hundred and eighty-five physicians are newly certified specialists in family practice and are the charter diplomates of the American Board of Family Practice, after having passed either the first or second certifying examination.

With leadership from the American Academy of General Practice a distinct renaissance in this important area of medical teaching and practice is evident. The Arizona Medical Association is currently fortunate to have James L. Grobe, M.D. as its President, and he has recently been made President-Elect of the American Academy of General Practice, a distinct honor for him and his colleagues.

Arizona Medicine wishes to recognize the Arizona contingent of Diplomates of the American Board of Family Practice which includes James W. Anderson, M.D. (Phoenix), R. Robert Bates, M.D. (Tucson), Lewellyn B. Bayba, M.D. San Manuel), Charles A. Bejarano, M.D. (Claypool), James E. Brady, Jr., M.D. (Tucson), Robert C. Charnetsky, M.D. (Goodyear), Matthew Cohen, M.D. (Phoenix) Bernard J. Collopy, M.D. (Miami), John W. Curtin, M.D. (Phoenix), Robert F. Cuthbertson, M.D. (Phoenix), Everett E. Dean, M.D. (Phoenix), Arthur V. Dudley, Jr., M.D. (Tucson), Edmund F. Felix, M.D. (Tucson), Richard O. Flynn, M.D. (Tempe), John F. Ganem, M.D. (Phoenix), James P. Giangobbe, M.D. (Phoenix), James H. Hurley, M.D. (Phoenix), Norman A. James, M.D. (Glendale), Thomas W. Jensen, M.D. (Safford), George W. King, M.D. (Tucson), Rudolf Kirschner, M.D. (Phoenix), Gennaro Licosati, M.D. (Phoenix), DeArmond Lindus, M.D. (Tucson), John H. Lloyd, M.D. (Mesa), Robert A. McCulley, M.D. (Phoenix), Donald E. McHard, M.D. (Phoenix), Alberto B. Marquez, M.D. (Tucson), Karl L. Meyer, M.D. (Nogales), Jeffrey O'Connor, M.D. (Phoenix), Harry W. Ramseyer, Jr., M.D. (Phoenix), Donald F. Schaller, M.D. (Phoenix), Stephen D. Smith, M.D. (Phoenix), Robert E. T. Stark, M.D. (Phoenix), Robert Ersell Stevens, M.D. (Phoenix), Thomas C. Wilmoth, Jr., M.D. (Phoenix), and Paul W. Wright, M.D. (Claypool).

Well Done!

John R. Green, M.D.

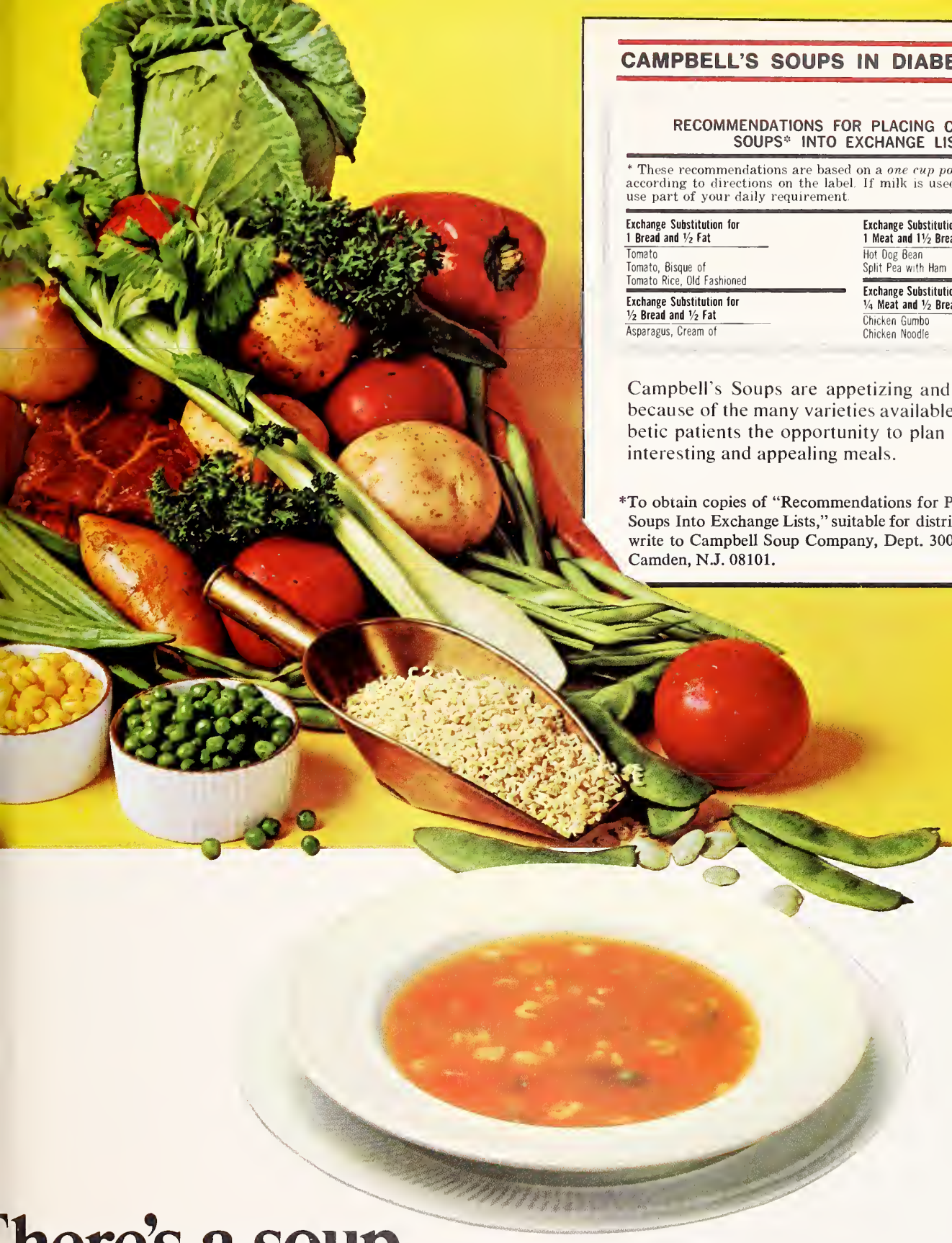
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President's Page

PEER REVIEW



President
James L. Grobe, M.D.

To peer review or not to peer review is no longer the question.

H.R. 1, the Social Security Amendments for 1971 is now before the Congress. It contains provision for setting up elaborate peer review mechanisms from on high (HEW). If Senator Bennett of Utah follows his 1970 pattern, as he said he would, he will put his Professional Services Review Organization (PSRO) amendment on the House bill. Government supervised peer deview is also being pushed for other federally funded programs, such as CHAMPUS and F.E.P.

AMA defines peer review as "evaluation by practicing physicians of the quality and efficiency of services ordered or performed by other practicing physicians. *Peer review is the all-inclusive term for medical review efforts.*" It includes such functions as utilization review, claims review, and medical audit.

ArMA has long been involved in peer review through its Section on Medical Review of the Governmental Services Committee so we are not unfamiliar with the process and goals, however, the proposed legislation contemplates a much broader application.

Few people I know enjoy having someone looking over their shoulder, but how much better it is to have that "someone" a colleague instead of a government employee.

Steps are presently underway to implement the House of Delegates Resoultion 9-71 which directs the creation of some form of Association controlled peer review mechanism to be ready so that when Congress mandates, ArMA will be in a position to function in a meaningful and professional way to prove that the best peer review is done by physicians.

If and when you are called upon to assist in this effort, I sincerely urge you to give it your best effort, so that the profession maintains control of this aspect of medicine.

Dean's Page

RADIOLOGY AT THE ARIZONA MEDICAL CENTER

"Radiology" is really an obsolete term, for it fails to identify which of the "Radiological Sciences" we mean. When Roentgen discovered the "X" ray in 1895, he could scarcely imagine its present importance in patient care, nor could he foresee the development of the several functions within the radiological sciences; Diagnostic Radiology, Nuclear Medicine, Radiation Therapy, Radiobiology, Radiologic Physics, and Radiologic Technology. The College of Medicine has started divisions of Diagnostic Radiology, Nuclear Medicine and Radiation Therapy, and will strive to transmit knowledge of the radiological sciences to medical students and to those physicians in Arizona who could beneft from that knowledge.

Diagnostic Radiology is directed by Dr. Irwin Freundlich, who came to us from Jefferson Medical College. Increased knowledge and the need to keep abreast of advances in that field have produced specialties within the specialty. Our division of Diagnostic Radiology includes Cardiovascular Radiology, Pulmonary Radiology, Pediatric Radiology, Bone and GI Radiology and Mammography. Within the next year we shall add Neuroradiology and GU Radiology.

The increasing relevance of diagostic radiology in the past five years has manifested itself in two ways. First, diagnostic radiologists have assumed greater responsibility for direct patient care, engaging actively in all clinical conferences, teaching, and — most important — direct consultation with the referring physician regarding the patient's specific problem. He now truly functions as a "consultant." Second, the level of excellence now required for special procedures is so high that special procedures radiologists have formed a specialty of their own, angiography, which yields significant benefits to patients because of earlier, more accurate diagnosis. Technological advances and the newer skills needed for these procedures has added at least one year of training after completion of radiology residency.

Within the past two decades the clinical application of radioactive tracers — Nuclear Medicine — has become a major branch of medical practice. It is estimated that between 30 and 40 percent of the patients entering hospitals this years will receive at least one dose of a radionuclide. Nuclear procedures may never be available in every physician's office, but there is scarcely a practitioner whose understanding of normal or disease patients is not increased through the application of radioisotopes to the study of biological processes. Dr. Robert O'Mara, from Upstate Medical School in New York, directs the Nuclear Medicine program at the Medical Center.

Dr. Max Boone, formerly Director of Radiotherapy at the University of Wisconsin, is director of Radiation Therapy, together with Dr. William Connor, a radiological physicist from the same institution. The University Hospital includes a radiotherapy area of 7200 square feet (gross) to house offices, laboratory and control area, four examining rooms, two waiting areas and three well shielded treatment rooms, with room for easy expansion as the need develops. We intent to provide a fully equipped radiotherapy facility, including a high energy source to produce high energy electron and X-Ray beams, as well as isotope sources for implantation into tumors.

Many Arizona radiologists who are interested in radiotherapy have substantially helped and encouraged us. As the program develops, we hope to evolve a broad-based attack on cancer. The improvement in results of radiotherapy over the past 20 years is impressive, but further effort in the clinical and basic sciences dealing with cancer problems is a pressing need, together with intensive collaboration between those striving to improve results in the treatment of cancer.

Teaching radiology to medical students begins in the first year with instruction in radiological anatomy as a part of the anatomy course. Second year students receive some instruction in nuclear medicine and radiation therapy. Radiologists throughout the state have contributed most gratifyingly to the teaching program.

Jack Layton

Editorial



WILLIAM B. McGRATH, M.D.

WIFE

A man cannot love an unhappy person. This is a biologic reef on which a million marriages have foundered.

A woman's response to crying is instinctive, maternal. Because she assumes that she can fill a need she is willing to investigate. When her husband is moody or unwell she will want to know why. She will demonstrate sincere interest and care.

Not so the man. His innate reaction to crying is not tenderness but aversion. If his wife is unhappy or ill he is likely to convey little or no solicitude. He will seem disinterestered or even a bit annoyed. Her need of love, her wish for reassurance may then dispose her to further display of her suffering or unconscious dramatization of it. But this will just push him away. It is unfortunately true that a woman can expect more understanding and sympathy from any stranger than from her own husband.

A man does not want to be this way. In a given instance he may be fully aware that he is not at fault, that he is not being blamed or punished. He may wish earnestly that he could express his concern. Yet the unconscious resistance is there, the instinct to turn his back on any unhappiness his wife may have. It is a peculiar and primitive sense of inadequacy, and irrational presumption that he will be a disappointment, that instead of helping he will only make things worse. A wife cannot appreciate this characteristic in a man. It would be unrealistic for her to judge her husband by it. Sympathy is not a fair measure of a man's devotion.

Men readily admit that they do not understand women. They make wry jokes about it. Women think they understand men. "They are just little boys." "I know my husband better than his own mother did." A woman was explaining her husband's purchase of photographic

equipment as a liking for expensive toys. In her matronizing way she was indulging and excusing him. She will never guess his secret reason for choosing a hobby that will keep him at home.

In some ways a woman's worth seems to diminish with time. She will bear no more offspring, and the children she has will outgrow their need of her. Meanwhile a man's worth in his own world is usually increasing. How will she compensate? How can she keep some sense of equality in relationship to her husband? By devaluating him in his private life. She may proudly acknowledge his professional accomplishments. But elsewhere and in front of others she will treat him like a dense child. Mother-knows-best, she will tell him what clothing not to wear and how not to behave in this or that social situation. The man will shrug and enter into this conspiracy to support his wife's sense of value. It is quicksand, however. Other women do not depreciate him, do not take it on themselves to find fault with him.

Or the wife may err in the opposite direction. Feeling unworthy and insecure, she may begin asking her husband's advice in matters in which he is no more expert than she. In any relationship one should be chary about asking advice. To ask advice is to invite criticism — and too soon the criticism comes without invitation. It sounds brittle but it is a wise policy never to accept unsolicited criticism on the one hand and never to offer it to others.

By the same token it is rude and insensitive to ask the type of how-come question ("How come you burned the toast?" which is both an accusation and a demand that the other person defend himself. Before asking any question one should think whether it can be answered at all or whether the one who replies will just lose face.

This matter of defensiveness is absolutely important. The marriage license is not a license to criticise. If you think of any neurosis or any psychosomatic disorder it will be one which a subtly cruel or stupid person can inflict on his or her mate. Do you know why? Because those illnesses are defined by the defense mechanisms, are caused by unsuccessful efforts at defense. The husband or wife who is not put on the defensive will not have to resort to repression or denial or rationalization or hyperventilation or any of the other miserable devices to control resentment and reduce anxiety.

We really do love a person who never puts us on the defensive. In such an atmosphere there is no ambivalence and we can relax and be ourselves. This is the oxygen of mental health and the breathing of a good marriage.



J. A. Miller, M.D.
Phoenix — 1892



Charles H. Jones, M.D.
Tempe — 1897



L. D. Dameron, M.D.
Phoenix — 1903



Ancil Martin, M.D.
Phoenix — 1894



P. G. Cotter, M.D.
Yuma — 1895

EARLY ARIZONA MEDICAL ASSOCIATION ACTIVITIES

JOHN W. KENNEDY, M.D.

From time to time various notes have been made about the origin of our Association, some of the early leaders of it, and some of their accomplishments.

What follows is simply some extracts of the minutes and proceedings of the Association as recorded in a minute book which resides safely in the hands of the Executive Director.

You will recall that the stimulus for organization of the State Association came from the Maricopa County Society.

In early May of 1892 the following letter was addressed by the Maricopa County Medical Association to the physicians of Arizona. It read in part as follows:

Phoenix, Arizona
May 7, 1892
Dear Doctor:

At a meeting of the Maricopa County Medical

Association held in Phoenix on the first Tuesday in this month the following preamble and resolution were unanimously adopted.

Whereas, it is evident that there are many earnest and jealous physicians in Arizona who are willing to contribute of their time and talent towards the general interest of the medical profession, and . . .

Resolved First, that we call a meeting of the physicians of the territory for the purpose of organizing a territorial medical association, and that said meeting be held in Phoenix on May 25 in order that we may elect delegates to the American Medical Association which meets in Detroit, Michigan June 7, 1892 . . .

J. Miller, President
D. D. Dameron, Secretary

This call to the colors did cause some stir in the territory, and the following physicians assembled in the parlors of the Commercial Hotel at Phoenix on the afternoon of May 25, 1892: Drs. William Gilbert of Mesa City, Mauck of Tempe, J. W. Green of Tucson, Brack of Tempe, Hamilton of Tombstone, Sabine of Gila Bend, Ward, Rawlings, Hughes, Keefer, Dameron, McIntyre, Whorton and Martin of Phoenix.

The temporary organization chaired by Dr. J. Miller and with Dr. Ancil Martin as secretary conducted the organizational activities on the first day ,and on the evening of that day Dr. J. Miller was elected president by ballot, and Dr. Ancil Martin, secretary.

The next day there is a note about the appointment of the Judicial Council which must have been very important because that is about the only committee mentioned specifically, and they do have a member from each county appointed. Pima county was represented by Dr. Feriner; Yavapai, Dr. Polk; Yuma, Dr. Cotter; Cochise, Dr. Porter; Gila, Dr. Colins; Pinal, Dr. Sabine; Coconino, Dr. Cornish; and Maricopa by Dr. Hughes.

(If you wish to gaze upon the sight of hallowed ground at which these early proceedings took place go gaze ye upon the Luhrs Hotel at Central Avenue and Jefferson Streets. This was the site of the original Commercial Hotel.)

The second annual session of the Arizona Medical Association was again held in the Commercial Hotel Parlor, February 28, 1893. (It was thought to be a clear sunny day, a little crisp even for February in Arizona, and the Indians who had come to barter had all carefully stopped at the "Clothing Tree" which was provided at which the braves could borrow enough clothing so that they could be seen on the streets of downtown Phoenix.) The present day permissiveness had not yet permeated our puritanical culture.

Governor N. O. Murphy welcomed them to the "Capitol City" and that morning twelve new members were added to the roll. The President announced the appointment of the Judicial Council, and the bylaws were adopted.

The third annual meeting was on February 28, 1893 and they met in the offices of Dr. Hugh Walker and Dameron.

Here, something of real importance took place. Dr. Dryden presented a bill for the creation and maintainance of a Territorial Board of Health. This was read and accepted for discussion. The next day a bill was hammered out and "the new bill formed from the two bills introduced to the Association; the new bill was ordered placed in the hands of the committee consisting of Dr. Dryden, Hughes and Ward, and Martin, and arrangements were made for presentation to the legislature." Even legal talent had to be sought after in those days because it was noted "it was moved by Dr. Martin that after the bill was rearranged by the committee it be placed in the hands of an attorney for further revision, and that the President be ordered to draw on the Treasurer for the necessary monies to pay the expense of the same. Motion carried."

The next day they carefully considered proposing an act "to regulate the practice of medicine." Apparently something had been perturbing the gentlemen and the following is recorded. "Dr. Hughes presented to the Association the following resolution.

> Whereas, The members of this Association view with regret the 'wholesale murder of unborn babies,' and
>
> Whereas, The chief justice of this territory has decided that there is no law against murdering 'unborn fetus until after the period of quicking,' Therefore be it
>
> Resolved, That we as the Territorial Medical Association 'urge upon our legislature to enact a law that will put a stop to such wholesale crime'."

It was moved by Dr. Dryden that a special committee consisting of President Miller and Dr.

Hughes be appointed to draft a bill preventing criminal abortions. Motion Carried.

Of course there was the election of officers and Dr. H. A. Hughes was elected president and the secretary was Dr. L. D. Dameron. They adjourned and selected Prescott as the next annual meeting place in May, 1894.

The Third Annual Session was held in Prescott May 2 and 3, 1394.

The scope of the activity of the Association at that time may be gathered from the Treasurer's Report.

They collected from members as dues $95. (Unfortunately, the accompaning list has been lost, so we do not know exactly who the men were by name; we do know that Article V of the Bylaws, adopted at the first meeting stated that the admission fee should be five dollars "in currency or coin of the United States and the Annual Dues of each members $2.50 United States currency of coin."

The President spent $36.10 for envelopes and certificates of membership printing of letterheads.

The President spent $40 for further printing transactions.

By cash in the Valley Bank $18.90, so that the total budget for that year was $95, and in this precious minute book of the early meetings is the first report of a Secretary/Treasurer and the Treasurer was William T. Barry.

At that meeting Dr. H. E. Stroud of Phoenix read a paper on "Medical Eletricity" which was well received and liberally discussed.

At the evening session the Nominating Committee held forth and Dr. Stroud moved "that inasmuch as the legislature will be in session at our next meeting, and that we have many interests to be considered by that body, that we hold our next Annual Meeting in Phoenix. Motion Carried."

Then they had another paper on "The Use Of Instruments in Labor" by Dr. Engels.

On Tuesday of the Second Session, Dr. D. M. Purman read a paper on "Aceptic and Anticeptic Midwifery."

In the afternoon session Dr. A. E. Martin presented a paper on the "Treatment of Acute Catarrh of the Middle Ear." Dr. Barry read the Annual Essay entitled "Medical Ethics" and this for a good many years apparently was the custom of Association to invite one or two men to read an Annual Essay. This was considered an honor to be so selected.

Dr. A. E. Martin of Phoenix was elected president.

The Judicial Council, which in these days must have been the most important committee of the Society, these men were as follows for this particular year: Dr. J. Miller of Yavapai County; Dr. T. S. Collins of Gila County; Dr. A. C. Wright of Pima County; Dr. W. T. Barry of Pinal County; Dr. R. C. Dryden, Apache County; and B. F. Holcombe of Cochise County; Dr. P. G. Cotter of Yuma County; Dr. Neil McIntyre of Maricopa County.

The fourth Annual Meeting was held in Phoenix February 5 and 6, 1895.

They were addressed by a Mr. T. J. Wolfley, Editor of the Republican "being called upon responded in a hearty manner saying that he and his paper would be found at all time in accord with the medical profession and was ever willing to do what was in his power for the advancement of the Association of Medical Science."

The next meeting place is Prescott; made their appointment of committees; elected the new president. The Secretary Dr. E. D. Dameron reported that they collected sixty dollars in dues from the membership that year.

They were still trying to get their board of health bill through the legislature and they instructed the legislative committee to "confer with the territorial legislature and arrange for a meeting with said body at such a time as was convenient, and such meeting to be in the interest of the 'Board of Health bill' now pending in the assembly."

That evening Dr. Ancil Martin delivered the Annual Address. Dr. Charles H. Jones read the Annual Essay on "The Duty of the Physician to the Patient."

On the afternoon session of the second day the legislative committee reported "that the Assembly had courteously received them and invited the committee to seats upon the floor of the House while they went into a committee of the whole for the consideration of the "Health Bill". Addresses in support of the bill were made by Drs. Hughes, Miller and Dameron. A conference was had with the Governor wherein he expressed himself as favoring the measure.

Dr. P. G. Cotter was elected President and he was inducted into this august chair. They then adjourned to meet in Prescott, May 28, 1896.

Letters to Editor

October 5, 1971

James Grobe, M. D., President
Arizona Medical Association
810 West Bethany Home Road
Phoenix, Arizona 85013

Re: The medical profession and the community in *general, Junior Achievement in particular.*

Dear Dr. Grobe:

I complained informally to Dr. Richard Besserman, a friend of mine, along the lines set forth in this letter, and he suggested that I pass my observations on to you.

The following is a quote from Don G. Campbell's column in the April 7, 1971 edition of "The Arizona Republic";

"It's pretty hard to get mad at a building. Irritated by its architecture, perhaps, but mad? And yet, for all of their supposed neutrality in the battle of philosophies, buildings have become the prime target of the radical young — as the California-based Bank of American discovered so painfully last year when, in an eight-monthh period, two of its branches, at Isla Vista and Irvine, were put to the torch. . . . All of this, understandably, is a source of considerable concern in virtually every executive suite in the country — not simply because of the immediate disruptions, but because of the ominous implications for the free enterprise system once it has passed into the hands of a generation that simply doesn't believe in it. And if this disbelief isn't unanimous, it pervades the thinking of enough teen-agers to be disturbing. *A poll of several thousand high school students by Opinion Research Co. of Princeton, N. J., for instance, revealed that* 53 *per cent of those queried are in favor of government ownership of industry; . . .* In its eighth year of activity in the Valley Junior Achievement — in its quiet way — has probably done more to sell the concept of free enterprise to Phoenix younsters than all the civic lectures, economic classes and parental pep talks ever staged here. Since its inception more than 7,000 teen-agers have participated in this exercise in mini-capitalism, and the total figure, by rights, should be five times that number since *four out of five youngsters who apply for admission to the program must be turned down for lack of funds and facilities to accomodate them.* Organized along the lines of any for-profit corporation, each JA company raises capital through the sale of stock and then utilizes this in the production of goods and services which it sells in the competitive market place. Some of them succeed, some of them eke out a marginal corporation existence, and some of them fall flat on their faces. Just like real life. And that, as Perry Peters, executive director of the JA program here points out, is the whole idea behind it: free enterprise works, but it takes sweat, skill and experience — not handouts. The fact that the JA lesson drives its point home can be seen in the same Opinion Research poll mentioned earlier. *Among those teen-agers polled who were without JA experience,* 53 *per cent favored government ownership of industry. Among those who had a JA background only* 9 *per cent still felt that government could do the job better than private enterprise . . .*" emphasis added

This year I permitted myself to be recruited to solicit for Junior Achievement's Annual Fund Raising Campaign. Among my prospects were four local M. D.'s. Realizing that they probably are as irritated as I am by solicitors, I concluded that the best approach would be the direct one. I called their receptionists, told them who I was, and asked them for three minute appointments with their doctors to make my pitch. I told them briefly what my pitch was and promised to walk out after three minutes. I was informed by each receptionist that her doctor could not see me. I told them that I would be glad to come at any time it would be convenient for the doctor. Each receptionist told me that no time would be convenient for her doctor, ever.

Don Campbell states it best in his column quoted above. There are many worthwhile movements afoot in our community, some of which can reasonably be said to be vital to the continuation and betterment of our society as we know it. These movements desperately need and deserve our support. For any of us to close our doors and our ears to all appeals for this support, regardless of their source, is tantamount to defaulting in our obligations to a community and society that to most of use has been very kind.

Sincerely yours,
William F. Behrens

25 October 1971

John R. Green, MD
Editor, Arizona Medicine,
The Arizona Medical Association, Inc.
810 W. Bethany Home Rd.
Phoenix 85013

Dear Dr. Green,

I wish the following to be placed in "Letters to the Editor" in the Arizona Medicine.

In the September 7, 1971 Arizona Weekly Gazette, an article by one of our better known physicians caught my eye. It was entitled, "Doctors should periodically prove continuing proficiency." The doctor is a weekly contributor to this newspaper, which happens to be one of the leading legally oriented newspaper in the State of Arizona. In other words, most attorneys in the State of Arizona subscribe to and read the Arizona Weekly Gazette. It is also captioned as, "The official newspaper of the City of Phoenix and Maricopa County." What I am leading up to, is the fact that what our physician has to say regarding medicine and the practice thereof, is weekly available to a large number of members of the legal profession.

In this particular column, our collegue discusses what he considers are the good points of continuing medical education. He makes mention of the fact that at the last Arizona State Medical Association meeting, a resolution was readily passed which required 150 hours of post-graduate study every three years in order to allow physicians to remain in good standing with the State Association. Then too, he refers to the New Mexico Plan which requires 120 hours of post-graduate study in three years, lack of which is considered sufficient justification for not renewing the physicians license to practice. He tends to rejoice in the fact that the physicians themselves initiated the New Mexico Plan. I repeat, re-examination for medical licensure every three years is now considered mandatory for physicians in New Mexico.

The doctor also make mention of the rapidity with which present medical knowledge has become obsolete. He uses this as an excuse as to why continuing medical education is a must, and I quote him ". . . unless modernization of the practitioner's armamentarius is undertaken he becomes hopelessly outdated and cannot possibly give the best medical care that the present day sick need and should get". I take it, digitalis is no longer used for cardiacs, and aspirin has ceased to be effective in arthritis.

For those of you unaware, under the Arizona requirement, 90 of the 150 hours must be obtained at medical meetings away from home. Of course your question would be what happens to the solo practitioner in the small community? Or to any practitioner of limited field in a community short on that specialty? The answer given by our columnist is that locum tenens could be supplied by a large hospital center (Good Samaritan?) or the new created University Center, or by small touring teams putting on performances via closed circuit television or seminars.
of State, or merely away from you own locality. The farce of all this is the continuing cry in the newspaper of doctor shortage. We now have the State Medical Association in a sense contributing to the shortage by forcing the doctors to move out of town for these 90 hours. When we start sending teams from large hospital centers or locum tenens subvened by the State Medical Association, should we also raise the cry "the Federales are coming?" The cry in Arizona has long been opposition to Federal control. In all of medicine we talk about opposition to creeping socialism and bureaucritic control. But what would one call the accepted proposal which has now been publicised before the legal profession?

We have all gone to State and National meetings and are not unaware of the large percentage of physicians who sign in for tax purposes and then fail to attend any of the lectures or seminars. We are not unaware of the now commencing "Me-too-ism" of the various hospitals giving 7:30 AM courses in order to meet the continuing medical education requirements. How can the Surgeon, the Assistant Surgeon, and the Anesthetist these sessions when Surgery starts at 7:30 AM? Is surgery supposed to be postponed until after the colloquium ends?

Has the practice of medicine fallen to such incredible mediocrity that from all corners the cry goes out POOR MEDICINE, POOR CARE OF THE SICK; LACK OF MEDICAL KNOWLEDGE OF THE PHYSICIAN? I for one do not think this is true. There are very few physicians whom one may call incompetent, and these physicians are soon found out. Then it is in the Law Courts of the Community that they can be judged. Setting up Kangaroos Courts in effect, if not in reality, only serves to demean the profession and to open the flood gates for what in

many instances are unwarranted lawsuits. I believe that the physician practicing in this State is, in most instances, a conscientious, and good practitioner of his art. I believe he knows his own foibles and shortcomings. I believe he knows when he is lacking in knowledge and what he needs to do in order to remedy his deficiency. The average physician spends a great deal of time reading the latest literature, and listening to the detail men, who not only purvey the drugs of their company, but the medical and technical know how of these drugs and others of which they may be interrogated.

I write this letter merely to call attention to something that I feel is very important to every one practicing medicine in this State. I write it to point out that the Lawyers are acutely aware of ridiculous standards which we physicians are setting. I write it to point out apathy in the medical profession by allowing such controls to be instituted. If we do not cure this evil which is now pervading our Association, who knows what harassment will be found in the future?

Sincerely yours,
Murray Rosen, M.D.

Editor
Arizona Medicine
810 West Bethany Home Road
Phoenix, AZ 85013

Dear Dr. Green:

Dr. Rosen's letter of concerns, criticisms and charges revolves around the following facts and allegations:

1. New Mexico physicians initiated a plan which requires 120 hours of Continuing Medical Education every three years for maintenance of licensure. Reexamination for medical licensure is mandatory for New Mexico's physicians.
2. ArMA now requires its membership to complete 150 hours of Continuing Medical Education every three years. Dr. Rosen states that ninety of these hours must be obtained at medical meetings away from home. This allegation leads to concern about the solo practitioner and the specialist in short supply in smaller communities. Forcing him to leave town and perhaps the state aggravates the doctor shortage problem.
 A few solutions to the doctor's dilemma offered recently by a physician contributor to the "Arizona Weekly Gazette", such as locum tenens sponsored by ArMA or touring physician teams from large hospital centers lead to creeping socialism and burcaucratic control.
3. Surgeons and anesthetists will now be required to attend 7:30 a.m. courses in order to meet their Continuing Medical Education requirements and this will create scheduling problems.
4. In some fashion kangaroo courts will begin to operate; the profession will be demeaned; and unwarranted lawsuits will proliferate as a result of the ArMA program.
5. Physicians are setting ridiculous standards for themselves as a result of apathy which will lead to future harrassment.

Several articles could be written in answer to all of Dr. Rosen's questions, inferences, claims and objections. Some fundamental issues are raised about which segments of the profession have differing if not opposite viewpoints emanating from deeply held convictions. While it is not appropriate to engage in a philosophical discussion about these viewpoints, I will try to respond to the five main charges.

First — The New Mexico program and relicensure. Their House of Delegates has approved the concept of relicensure every three years on the basis of participation in Continuing Medical Education. Dr. Rosen is mistaken about mandatory reexamination for relicensure.

ArMA appointed an Ad Hoc Committee on Periodic Relicensure in 1969. This committee unaaminously concluded that a relicensure program not be considered. It stated that a physician's continued competency to provide high quality medical care should be maintained by every means available and that postgraduate medical education is the most important method of accomplishing this goal. The committee's recommendation that Continuing Medical Education be made a requirement for membership in ArMA eventually was adopted by resolutions passed in the 1970 and 1971 House of Delegates' meeting.

What is important in this discussion is that in both states the two different programs resulted from action which was initiated by physicians, thoroughly dissected and reassembled in several committees, approved and adopted by the respective Association's Board of Directors and House of Delegates.

Second – The small town physician and the Continuing Medical Education requirements. I will presume for the sake of discussion that, when he states that ninety credit hours must be obtained away from home, Dr. Rosen is referring to the Required education category rather than the Elective category, since the Required category discusses activities which are not commonly held nor currently available outside the metropolitan areas, while the elective category includes educational opportunities which are available in all but a few small communities. The Required category, however, has a minimum of sixty, not ninety hours. This requirement can be met in a variety of ways. One example is as follows: The Family Doctor of G.P. who attends the annual Arizona Academy of Family Physicians scientific program and the scientific sessions of ArMA's Annual Meeting will fulfill the minimum requirements. This will take less than twenty days in three years. In most non-metropolitan areas he can obtain the ninety hours of clective education without leaving the community.

Can the small town doctor in reality take time off to continue his medical education? There are seventy-five physicians of the three hundred member Arizona Academy of Family Physicians who practice in small communities and who have demonstrated that they can and will keep up with Academy requirements, which are somewhat more stringent than the new ArMA requirements. These physicians believe that participation in Continuing Medical Education helps them to practice better medicine.

The difficulty of the solo physician in leaving the small community for any purpose is real. ArMA's resolution on Continuing Medical Education has provided safeguards for those physicians who cannot possibly absent themselves from their communities in order to complete the education requirements.

Arizona's Regional Medical Program in conjunction with the College of Medicine has sent out teams of physicians to the non-metropolitan areas during the past year to provide Continuing Medical Education programs and these have been well received by the small community physician. The visiting professor and circuit riding teams from medical schools have earned excellent physician acceptance in such state as Kansas, Pennsylvania and Michigan. Any potential hazard of socialism or bureaucratic control has not surfaced thus far.

Third – The effect of ArMA's program on Surgeons and Anesthetists. It would be surprising if Surgeons and Anesthetists were to have 7:30 a.m. educational programs in response to ArMA's program. Hospital staff committees usually select the day and hour most convenient to their respective specialties for their meetings. While Internists or Pediatricians usually have early morning meetings, Surgeons usually meet during lunch hour, Plastic Surgeons in late afternoon, Anesthetists in the evenings and so on. In any event, these physicians have for years had a wide varicty of national, regional, state and local specialty society meetings available to them. Because of the vital interest of their national societies in Continuing Medical Education most specialists have become accumstomed to completing far more than the minimum requirements in ArMA's program.

Fourth – The threat of kangaroo courts and an increased number of lawsuits. There is a Grievance Committee of the Arizona Medical Association which will serve as an Appeal Board for those physicians who do not complete ArMA's educational requirements. A profession striving to improve itself through continuing education will not demean itself. The physician who does keep up through Continuing Medical Education is less liable to malpractice than the one who maintains status quo.

Fifth – Ridiculous Standards, Apathy in the Profession and Fear of the future.

Physicians are setting standards in their hospital work, their office practices and in their continuing education. Dr. Rosen sees evil and apathy in a profession which is instituting self-controls. What one man sees as vice, another sees as virtue.

Sincerely.
Robert E. T. Stark, M.D.
Chairman
Medical Education Committee

Editor
Arizona Medicine

Re: Healing 'Round the World

Perhaps Doctor McGarey would do for Edgar Cayce what Mary Baker Eddy did for "Doctor Messmer"!
John Kennedy, M.D.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

AD HOC COMMITTEE ON PROGRAM DEVELOPMENT AND ADMINISTRATIVE EVALUATION

The meeting of the Ad Hoc Committee on ArMA Program Development and Administrative Evaluation, held on Saturday, October 9, 1971, at the Headquarters Office, 810 West Bethany Home Road, Phoenix, Arizona, convened at 10:17 a.m., Albert W. Brewer, M.D., Chairman presiding.

REVIEW

Dr. Brewer reviewed the charge to this Ad Hoc Committee given by James L. Grobe, M.D., in his inaugural address on April 27, 1971:

"Today our profession in under pressure from government, labor, industry and various organized groups in our society. As never before we need united efforts to meet the challenges thrust upon us. In the past we have given aid and comfort to our antagonist by independent, unilateral actions. This luxury can no longer be afforded. We need to strengthen the cooperation between the county societies and the state association. We need to better understand common administration problems. We must avoid duplication of programs, personnel and facilities. I propose to you an Ad Hoc Committee on Program Development and Administrative Evaluation. This Committee would be appointed by the President with the approval of the Board of Directors. The Committee would consist of five members, two from Maricopa county, one from Pima county and one each from the northern and southern part of our state. This Committee should evaluate communication between the state and its constituent chapters, study and evaluate programs at both levels and propose ways to make our organization more effective and responsive to our needs.

The final report of this Ad Hoc Committee should be presented at our next annual meeting for appropriate action."

After evaluating the President's charge, it was determined that it should be broken down into three categories as follows:

1. EVALUATE COMMUNICATION BETWEEN STATE AND CONSTITUENT CHAPTERS.
 The Committee recognizes that there is still a lack of personal and written communication between the state and county societies. It is also recognized that there is a lack of communication between the American Medical Association and the county societies.
2. STUDY AND EVALUATE PROGRAMS OF THE STATE AND CONSTITUENT CHAPTERS.
 It is recognized that, all too often, the state and county societies may be duplicating their efforts, perhaps unknowlingly and in opposition to each other. It was, therefore, determined that each county society be requested to give a brief outline of their current programs and committee functions prior to the next meeting of this Committee for evaluation.
3. PROPOSE WAYS TO MAKE OUR ORGANIZATION MORE EFFECTIVE AND RESPONSIVE TO OUR NEEDS.
 It was determined that after evaluating the first two categories, the Committee should be in a position to make appropriate proposals to the House of Delegates during the next annual meeting. It was also determined that each constituent society give consideration to this most important category and make separate proposals to the Committee prior to the next meeting.

Meeting adjourned 11:15 a.m.

E. Sattenspiel, M.D.
Secretary
By
Gary L. Barnett
Associate Executive Director

PEER REVIEW ADVISORY COUNCIL

The meeting of the Peer Review Advisory Council of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Sunday, October 10, 1971, convened at 10:13 a.m., Patrick P. Moraca, M.D., Chairman, presiding.

MINUTES

Minutes of the meeting held June 27, 1971 were approved as distributed.

PRE-ADMISSION SCREENING & UTILIZATION REVIEW

Mr. Foster reviewed the titled program (Draft #3) in detail and answered many questions. The Arizona Hospital Association's letter of 9/22/71 and 9/27/71 relating thereto were considered as well as the action of the Arizona Medical Association's Board of Directors taken at their meeting on September 26, 1971.

Mr. Foster requested that ArMA appoint three members to work with representatives of the Arizona Hospital Association and Blue Cross-Blue Shield to explore the concept further.

It was agreed by members of the Committee that three members be so appointed to work with three representatives of the Arizona Hospital Association (suggesting that one be a hospital chief-of-staff) and three representatives of Arizona Blue Cross-Blue Shield (suggesting that one be a physician from one of their Boards of Directors).

PEER REVIEW DEMONSTRATION

For the benefit of those present, Dr. Hugh Thompson and others provided a demonstration of how a peer review committee actually functions.

PEER REVIEW MECHANISM

Four proposed mechanisms for implementing Resolution 9-71 were reviewed.

It was moved and carried that this Committee recommend to the Board of Directors that ArMA create a "United Foundation of Arizona", which would be an arm of the Arizona Medical Association to contract with HEW and which would funnel Peer Review to the local medical societies and foundations. This organization

might involve itself in all other aspects of foundation work.

Meeting adjourned 2:32 p.m.

Edward Sattenspiel, M.D.
Secretary

GOVERNMENTAL SERVICES COMMITTEE

The meeting of the Governmental Services Committee of the Arizona Medical Association, Inc., held Saturday, October 16, 1971, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 12:26 p.m., Walter R. Eicher, M.D., Chairman, presiding.

MINUTES

Minutes of the meeting held March 6, 1971, were approved as distributed.

HEALTH MAINTENANCE ORGANIZATIONS

Dr. MacDonald reviewed the history and current status and development of HMOs and explained the pressures from the Nixon administration to see that they are developed. Mr. Dan Maruna explained the mechanism for applying for grant money and answered many questions from the committee and other guests.

It was reported that four HMO fund applications have been submitted from Arizona. One from the University of Arizona College of Medicine, one from the Maricopa Foundation for Medical Care, one from Dr. Schaller and one from Samaritan Health Service.

MEDICREDIT

Mr. David Morrison explained the details of the American Medical Association's Medicredit proposal and showed a slide-sound program on the subject.

PART A — INTERMEDIARY — ARIZONA BLUE SHIELD

Dr. Koren reported briefly that the same poor situation exists with regard to ECFs as existed at the last meeting. That more emphasis is being placed on the "medical need" for hospitalization. He reported that Blue Cross, nationwide, has been audited over 600 times during the past year. Forty-one million dollars has been paid out in Arizona to hospitals, ECFs and Home Health Agencies during the first nine months of this year. HEW and SSA are showing greater concern over the matter of containment of cost of the program.

PART B — INTERMEDIARY — AETNA LIFE & CASUALTY CO.

Mr. Blazek reported that Arizona is still among the top agencies as rated by promptness of payment. He also stated that new reasonable charge screens are in effect as of 10/7/71, with the exception of Anesthesiology which will be implemented soon. Effort to computerize the operation is underway with the hope to be fully computerized by March, 1972.

In a response to a question, he stated that 50% of all physicians bills have been reduced.

SECTION ON COMPREHENSIVE HEALTH PLANNING

No report.

SECTION ON ECONOMIC ASPECTS OF MEDICARE

Dr. Walker discussed the problem of the "near poor" as it relates to payment of deductibles stating that it is generally the physician who ends up absorbing this cost instead of the patient.

SECTION ON INDIGENT CARE

Dr. Eicher reported on the AMA's Committee of Health Care for the Poor activities. He also indicated that the activity for which this Section was created is being taken over by other broader programs and therefore recommended disbanding the Section.

SECTION ON MEDICAL REVIEW

It was reported that because of the expense of the Medicare program being much higher than was originally anticipated, methods of reducing the cost are being explored by the Carrier of Part B, i.e., Aetna, and are presented to the Section for review and comment.

In the course of developing guidelines, the Carrier has come across highly questionable acts by certain physicians known by many of us to practice in a gray area insofar as ethics are concerned. There have been a few instances where perfectly legitimate practices have been questioned, but the members of this Section have been successful in explaining these situations to the representatives of the Carrier.

There have been legitimate questions raised by the Carrier, questions which have led to interviews with the involved physicians themselves. In most instances, after explanations have been made to the physicians, they understand the problem and make an attempt to abide by the guidelines. These are all problems which have been solved at the Section level.

However, a case recently came to the attention of the Section which, after conclusion of deliberations, felt should be brought to the full committee for action. The Section wishes to emphasize that the decision to bring the matter to this committee was a unanimous one.

The case has to do with a situation where the members of the Section believe the surgeon may have acted beyond the area of his competence, and the Section recommends that the Governmental Services Committee ask that the Board of Medical Examiners evaluate the quality of the surgical care rendered to the patient.

In this instance the Section did not consult with the surgeon himself, but the recommendation was reached by a review of the record and with the help of two consultants; a plastic surgeon and a general surgeon. The Section wishes to make clear that they are not sitting judgment on this surgeon, but based on the evidence presented to the Section, there are serious doubts as to the professional performance and quality of care rendered by the surgeon.

Since the Medical Practice Act requires that in such situations a report shall be made to the Board of Medical Examiners, it was decided it was incumbent upon the committee to initiate such action. It was believed appropriate that it should proceed through official channels, meaning the recommendation should be brought before this Committee rather than for the Section to write directly to the Board of Medical Examiners.

The case has to do with a surgeon who rendered surgical treatment to a patient who had a squamous cell carinoma of alveolar ridge involving mandibular retromolar area, soft palate and anterior tonsillar pillar and for the course of this treatment, nine different operations were performed.

The information which bothered the committee were:

1. That this may have been the first time the doctor performed the operation without supervision.
2. That physicians who have known and worked with the doctor felt he was not qualified to do this type of operation.
3. That this is not the first time that the doctor's performance has been questioned.

In summary, the Section felt obliged to bring the matter to the attention of this Committee. The letter from the chairman reads in part as follows:

"After further consideration of the case, it was moved and carried to recommend to the Governmental Services Committee to have an appropriate body such as the Board of Medical Examiners evaluate the quality of the surgical care rendered to this patient."

It was moved and carried that the case in point be referred to the Board of Directors with the recommendation that they refer the matter to the Board of Medical Examiners to evaluate the quality of the surgical care rendered to the patient.

New Appointees

Dr. Eicher reported that Daniel H. Goodman, M.D., and Paul H. Koren, M.D., had been newly appointed to the Section.

SECTION ON MENTAL HEALTH

Dr. Levenson reported on the concern that full psychiatric care be included in whatever national health insurance program is developed.

SECTION ON OEO & NEIGHBORHOOD HEALTH CENTERS

No report.

SECTION ON REGIONAL MEDICAL PROGRAMS

Dr. Melick reported on a recent site visit made several weeks ago by ten HEW personnel. The purpose was to see what had transpired so that a recommendation could be made to the national advisory council regarding continuing financial report. Dr. Melick indicated that future site visits will be every three years. He also reported on the status of the various ongoing programs specifically pointing out that the kidney disease project is the first evidence of full cooperation that has ever occurred medically between Tucson and Phoenix.

Dr. Melick indicated that the Secretary of HEW, Elliott Richardson, has asked for a new direction in RMP de-emphasizing Heart, Stroke & Cancer, while emphasizing helping in the organization of delivery of health care at the local level, while not participating directly in the delivery of health care. The main thrust of RMP is still in continuing education.

SECTION ON RESEARCH & STUDY

Dr. Reed reported that the original reason for establishing this Section has been satisfied and therefore should be disbanded. The Chairman so ordered.

SECTION ON UTILIZATION REVIEW

The question of appointing a chairman to this section was discussed. It was determined that no appointment be made at this time.

Meeting adjourned 4:08 p.m.

Edward Sattenspiel, M.D.
Secretary

MEDICAL ECONOMICS COMMITTEE

Meeting of the Medical Economics Committee of the Arizona Medical Association, Inc., held Saturday, October 23, 1971, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 1:36 p.m., John H. Ricker, M.D., Chairman, presiding.

MINUTES

Minutes of the June 7, 1970 meeting were approved as distributed.

LIFE INSURANCE FOR PHYSICIANS' SPOUSES

Mr. Charles de Leeuw presented a proposal and for endorsement of a program offering life insurance on Association members' spouses as follows:

PREMIUMS — The following table of premiums reflects cost for $10,000 of insurance payable in accordance with the member's attained age at nearest birthday annually.

Age Nearest Birthday	Annual Premium
Under 35	$ 28.80
35 to 39	33.60
40 to 44	44.40
45 to 49	64.80
50 to 54	97.20
55 to 59	141.60
*60 to 64	205.20
*65 to 69	302.40

*For renewal only. Age 60 maximum entry age.

GUARANTEED INSURABILITY OPTION — Additional optional coverage is available at a slight extra premium which will provide the privilege of purchasing up to $20,000 of additional insurance in maximums of $10,000 at specified future dates without furnishing evidence of insurability. Purchase dates begin at age 25 and continue in the three year intervals with the final purchase age being 45. The option will be available for amounts from $1,000 to $10,000. Evidence of insurability will be required for each person applying for the benefits. Rates are as follows:

Age Nearest Birthday	Premium Per Year Per $1,000
Under 35	$ 1.44
35 to 39	1.68
40 to 42	2.22

Termination and Conversion Privileges — Coverage will terminate following the 70th birthday of the member or upon termination of membership in the Woman's Auxiliary to the Arizona Medical Association. Insurance can be converted at any time to a policy of whole life or endowment insurance offered by the company at attained age rates or if the member leaves the association. No conversion will be possible past age 70.

Settlement Options — The policy contains all standard settlement options. In lieu of a lump sum payment in the event of death, members may elect to have the proceeds paid in limited installments or in life income.

The Consumers National Life Insurance Company of Evansville, Indiana, is pleased to offer a program of Association Group Life Insurance coverage for members of the Woman's Auxiliary to the Arizona Medical Association. Full particulars follow.

Who is Eligible — All dues paying members of the Woman's Auxiliary to the Arizona Medical Association. What Does the Plan Provide — Up to $30,000 of Life

Insurance at exceptionally low group rates. The basic plan is $10,000 and the additional $20,000 can be made available to interested members either through the use of the guaranteed insurability option or through furnishing evidence of insurability at the time of issue. This group insurance program is an excellent supplement for members' present insurance.

Guaranteed Issue — The basic $10,000 amount will be underwritten by the company on a guaranteed issue basis if 30% of the present members will enroll promptly during the original enrollment period.

It was moved and carried that the committee recommend to the Board of Directors that the Association endorse the proposed group life insurance plan for spouses of members of this association as offered by Consumers National Life Insurance Company.

OVERHEAD EXPENSE DISABILITY INCOME PROGRAM

Mr. Charles de Leeuw reviewed his proposed Overhead Expense Disability Income Program as follows:

Overhead Expense Disability Insurance is a program specially designed to reimburse participating members for the expenses of maintaining their office during periods of total disability.

Eligible Participants — Association members through age 64. Coverage may be renewed to age 70.

Amounts — Eligible members may apply for benefits up to $2,000 per month but not to exceed 100% of covered expenses.

Covered Expenses — Covered expenses are those which you normally incur in the practice of your profession. They include but are not limited to: rent, employee salaries, electricity, telephone, heat and water, laundry, mortgage interest, equipment leases. They do not include any expense for which you were not periodically liable before your disability; remuneration for yourself or anyone replacing you; cost of equipment or merchandise; payments on the principal of any indebtedness.

Participation — If there be other valid coverage in force at the time of application, the amount applied for when combined with such other valid coverage may not exceed 100% of covered expenses. If there be other valid coverage in force at time of disability, the customary corrdination of benefits provision will not apply unless aggregate monthly overhead expense benefits exceed total monthly covered expenses.

Elimination Period — Benefits begin with the 31st day of disability. Any payment for less than a full month shall be prorated on the basis of a 30 day month.

Benefit Period — Benefits continue during disability for a period of eighteen months. However, should monthly expenses incurred be less than the maximum monthly benefit purchased, payments will be continued until an amount equal to 18 times the monthly benefit has been paid.

Renewability — The policy may be renewed to the policy anniversary nearest the insured's 70th birthday unless he fails to pay premiums when due; ceases to be a member of the Association; retires from practice; or the Company declines to renew all such policies issued to members of the Association.

Exclusions — War, declared or undeclared; intentionally self-inflicted injuries; pregnancy; attempted suicide.

Underwriting — Subject to issue and participation limits previously described, Occidental Life will provide guaranteed issue to eligible applicants age 55 and under based on the following schedule:

Number of Applications Received During Initial Enrollment Period	Monthly Guaranteed Issue Benefit
250	$300.00
350	500.00

Applicants age 56 to 64 will also be entitled to guaranteed issue subject to a statement that the applicant has not been disabled for a period of over 30 days during the 24 months preceding enrollment. Applications for amounts exceeding the guaranteed issue limit will be underwritten on the basis of a medical questionnaire. The Company may request additional evidence of insurability to complete underwriting.

New Members — New members through age 59 will be eligible to participate in the program and to guaranteed issue benefits if they apply for coverage within 60 days of their acceptance into the Association.

Outstanding Features — 24 hour coverage. No house confinement is necessary to qualify for benefits. Recurrent disability considered a new disability after the insured has returned to work for six months. Waiver of premium after only 90 days of continuous disability.

Tax Deductible — Internal Revenue Bureau Ruling 55-264 — (Each insured should consult with his tax consultant as to the deductibility of premiums in his individual circumstances.)

Semi-Annual Premiums*

Per $1,000 Monthly Benefit

Age of Applicant at Issuance or Renewal of Insurance

Under 30	30-39	40-49	50-54	55-59	60-64**	65-69**
25.00	35.00	45.00	55.00	80.00	105.00	135.00

Minimum Premium: $10.00 Semi-Annually

*In the event that the Occidental rather than the Association is to provide the billing and collection service, 50c will be added to each semi-annual premium. The Occidental would provide three premium notices: 1) Approximately 15 days before the premium due date; 2) Approximately 10 days before the expiration of the 31 day grace period; 3) Approximately 37 days after the due date.

**Renewal only, except that members through age 64 may apply during the initial enrollment period.

It was moved and carried that the committee recommend to the board of directors that the Association endorse the proposed overhead expense disability income program as offered by the Occidental Life Insurance Company of California.

DEFENDANT'S REIMBURSEMENT POLICY

Mr. Richard H. Dutwiler reviewed the entitled program briefly as follows:

Coverages — The indemnity provided in the policy is for loss resulting from the insured's required attendance at the trial of a civil suit for damages against the insured (as a defendant) alleged to have been caused by: A) malpractice in the practice of the profession of the insured as stated in his declarations, or B) an automobile accident.

Daily Indemnity — Per Suit Limit — Premium Rate — The insurance provided hereunder is for the indemnity daily rate, the per suit limit and the premium rate as set forth in the following schedule:

Coverages	Indemnity Daily Rate	Per Suit Limit	Annual Premium
A. Malpractice			
Defendants	$200.00	$5,000.00	
Indemnity			$30.00
B. Automobile Accident			
Defendants	$200.00	$5,000.00	
Indemnity			

All applications received from members in good standing of the Arizona Medical Association, Inc., will be accepted and individual cancellations for just reasons can only be made after the approval and concurrence of the Medical Economics Committee of the Arizona Medical Association, Inc.

It was moved and carried that the committee recommend to the board of directors that the Association endorse the proposed defendant's reimbursement policy as offered by the National Casualty Company.

CAL-WESTERN LIFE PROGRAM

Mr. George B. Littlefield reviewed the existing Group Life Insurance program figures as follows:

Experience

	From Inception through 1969	1970	From Inception through 1970
Earned Premium	$ 433,519	$47,408	$ 480,927
Incurred Claims	272,902	33,911	306,813
Claim Ratio	62.9%	71.5%	63.8%
Statistics	12/31/70		9/30/71
Policies in force	284		271
Dependent Riders	112		107
Member Volume	$3,058,000		$2,913,000
Est. Dep. Volume	560,000		535,000
Production			
Policies issued	12/31/70		9/30/71
New Member	5		1
Other	3		1
Total	8		2

Policies on Waiver of Premium

Policy #	Name of Insured	Volume	Premium
101	Victor A. Mulligan	$ 6,000	$135.00 S/A
30	Daniel W. Kittredge	10,000	110.00 S/A
95	Melvin M. Halpern	10,000	265.00 A
252	Franklin B. Laneback	10,000	93.25 S/A

In the absence of the guests considerable discussion ensued over the poor production record of the present local agent, Mr. Charles Fisher.

It was moved and carried that this committee recommend to the board of directors that it authorize a change of agent for this program.

EVALUATION SERVICES

Mr. Bob McDonald reviewed extensively the Evaluation Services program that Young, Smith & Peacock, Inc., have to offer investing members of the Association. The firm would assist the physician in selecting advisers to manage assets.

It was recommended that this matter be referred to the Scientific Assembly Committee with the suggestion that a place be made on the 1972 meeting program for a presentation of this subject matter.

COMPUTERIZATION OF INSURANCE FORMS

Mr. Jere J. Brommer, Vice-President of the Valley National Bank reviewed that bank's activities with regard to computer applications for the physician's office, especially as it applies to insurance forms. He pointed out that the greatest stumbling block in their efforts is obtaining the appropriate hardware for installation in the physicians' offices. Mr. Brommer indicated that they have recently found a new firm in the east which appears to have developed what is needed and that a subsequent report will be forthcoming. Received for information.

Meeting adjourned 4:40 p.m.

Edward Sattenspiel, M.D.
Secretary

Bruce E. Robinson
Executive Director

BASH BENEFIT

AMA-ERF SILENT AUCTION

Happiness is different things to different people — helping others, gorgeous weather, a tax deduction, being involved, getting the closets cleaned out, and being with friends.

Happiness is getting it all together, and you can do this by donating things for our **Auction** at the state convention. For this bash benefit we need such things as art nouveau objects, ceramics, antiques, handcrafted items, and that thing Auntie gave you and you still don't know what its for — it's exactly what I've been hunting for ten years. When you are creating for the hobby show, really get with it and make an extra for the **auction.**

Your donations can be brought to the Arizona Medical Association's offices any Thursday morning when Auxiliary members are there for craft classes.

You will be hearing more about this later. Meanwhile, save your ritzy rummage, for the 1972 **Bash Benefit** to be held during the Annual Meeting in April.

Directory

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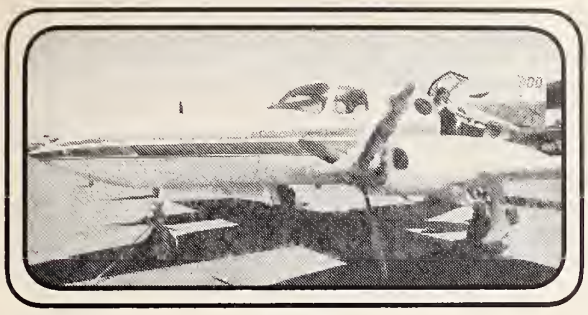
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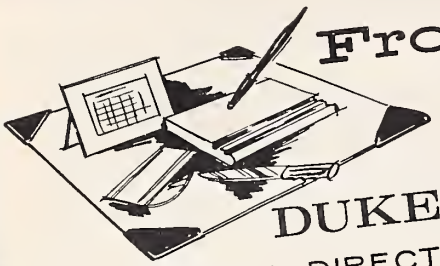
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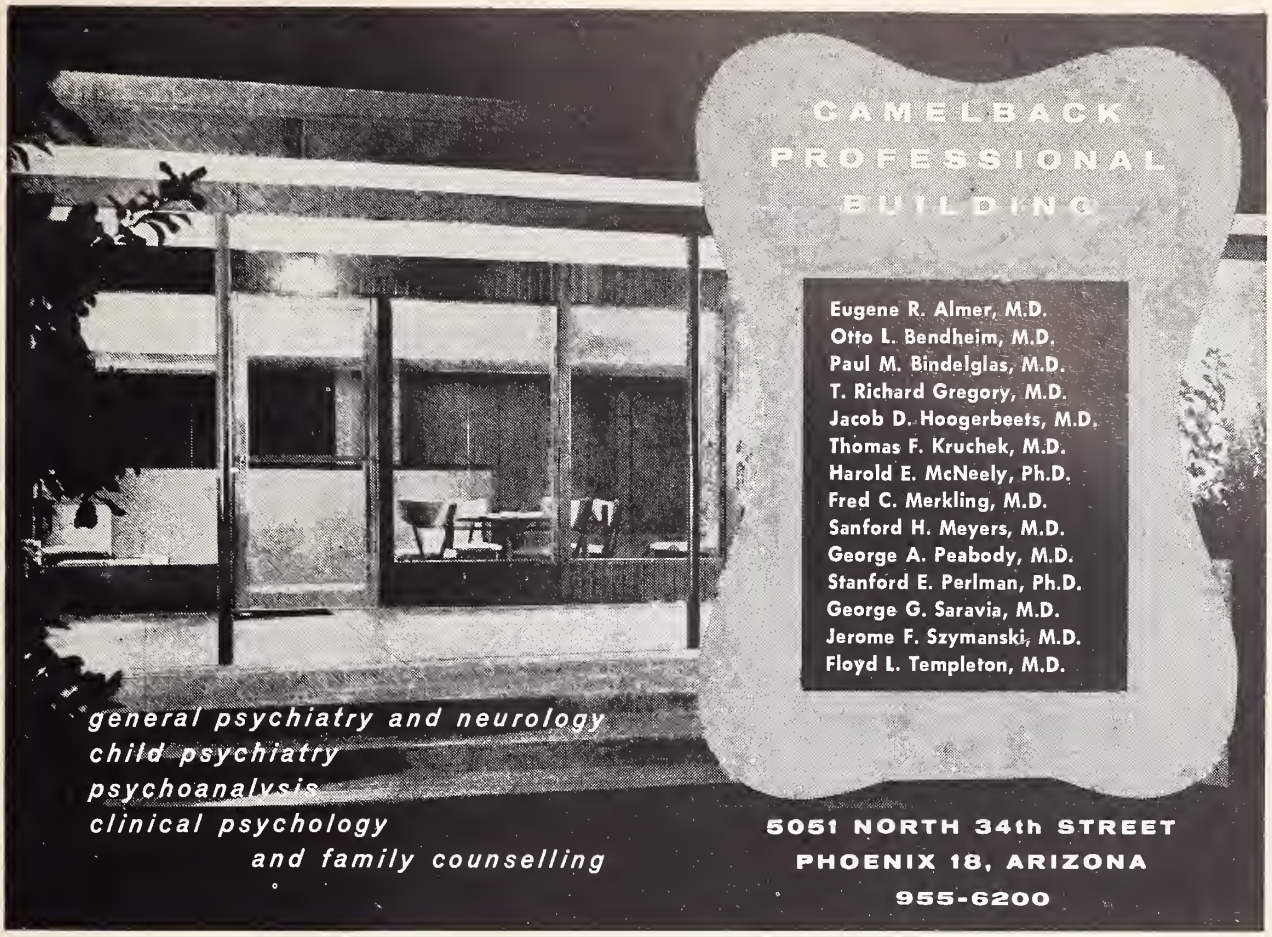
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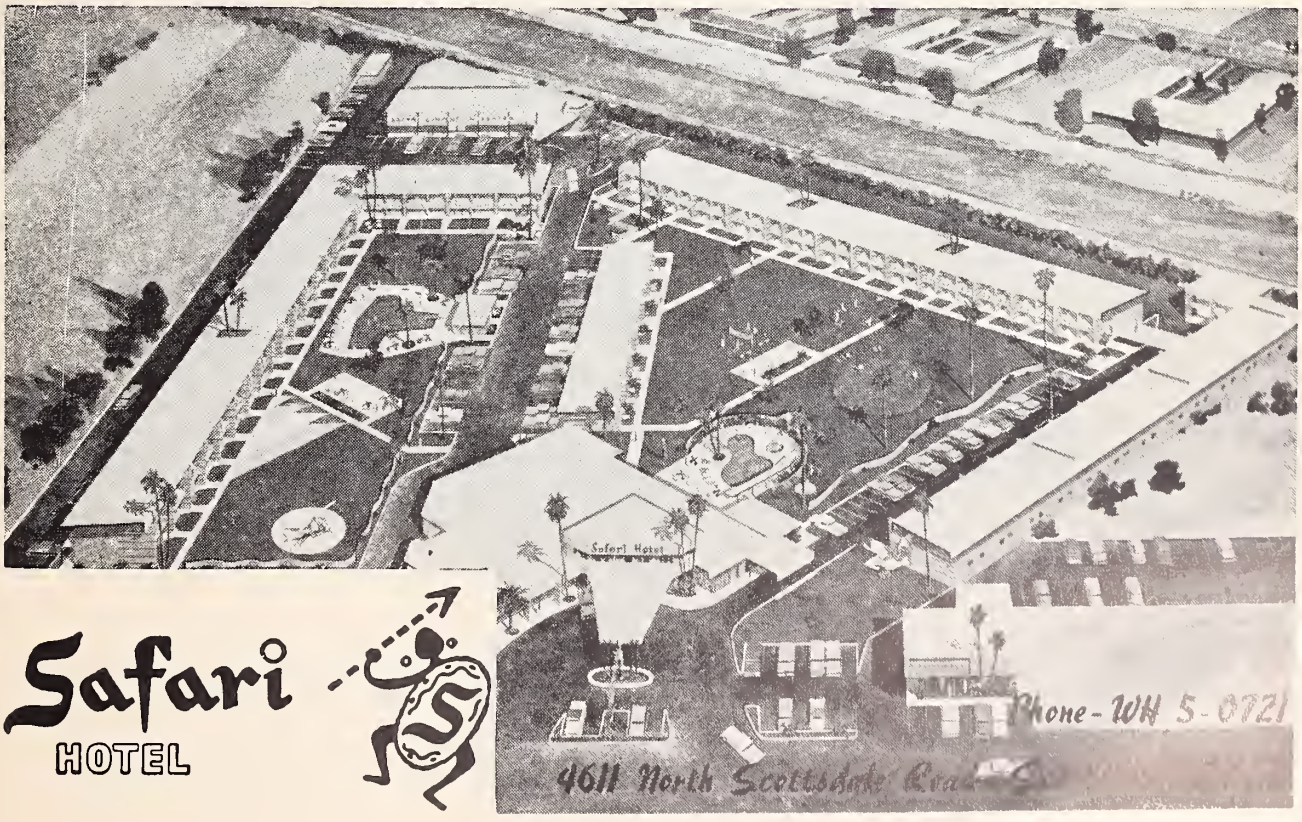
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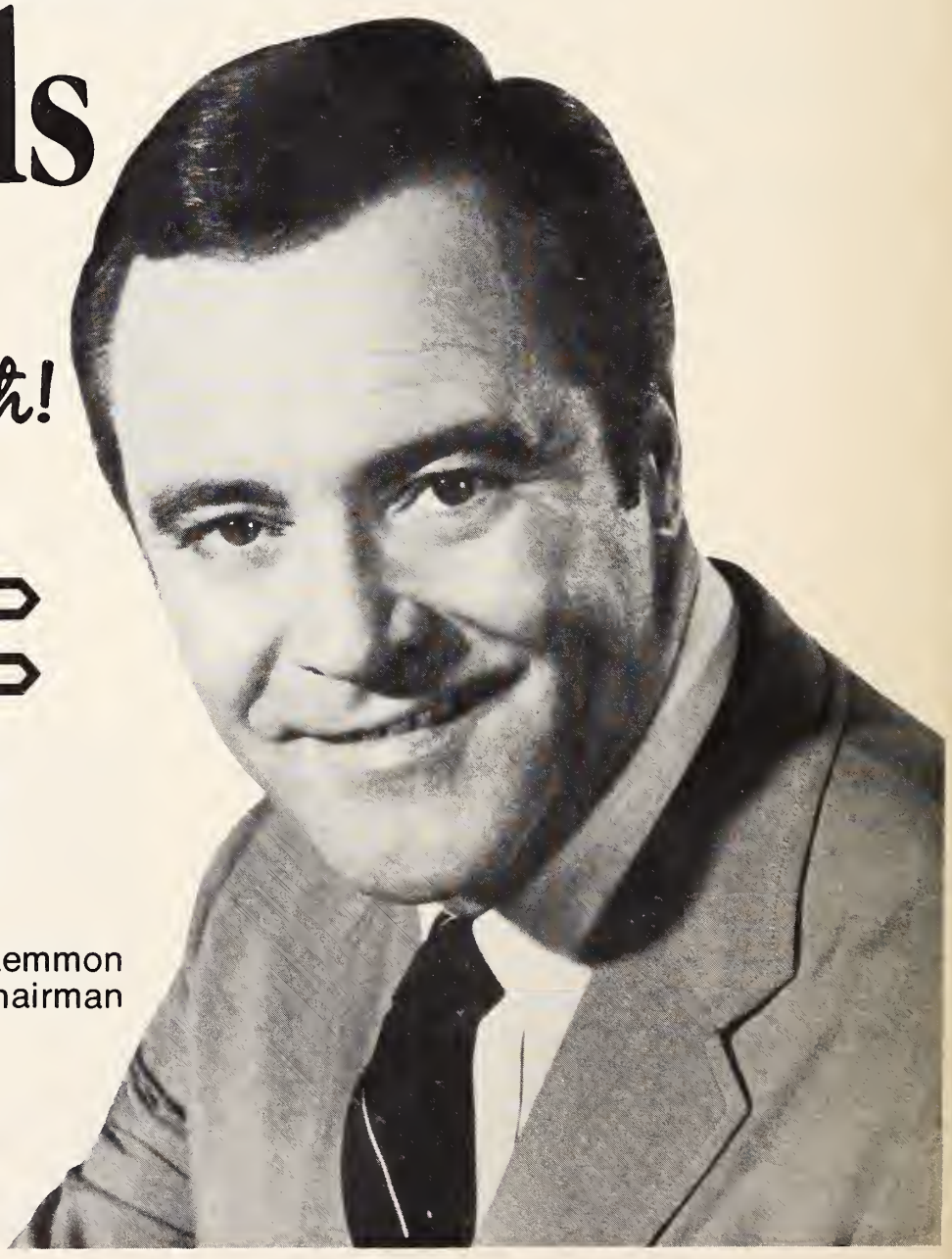
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